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New Year's Greeting from Our President

ONCE AGAIN the great clock has ticked off the last seconds of a passing year — a year marked by the growing recognition by our profession of its responsibilities in the field of public health.

May I on behalf of the Executive and of the Board of Governors of the C.D.A. extend cordial greetings to every dentist across Canada and express the wish that the spirit of goodwill among the members of our profession may long continue, so that we may make that full contribution to the health and welfare of the people of Canada that is within our field.

May I also wish each member of our Association a prosperous and very happy New Year.

HOWARD MERKELEY, D.D.S., M.D.S.
President of the C.D.A.

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The Journal
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VOL. 15 TORONTO, JANUARY, 1949 No. 1

DENTAL EDUCATION AND THE PROFESSION*

by ROY G. ELLIS, D.D.S., M.Sc. (Dent.), F.D.S.R.C.S. (Eng.), Toronto, Ontario

I AM deeply grateful for being given the opportunity of sharing in the festivities as you celebrate another important milepost in the short, but progressive history of the Faculty of Dentistry, University of Alberta. I bring you official greetings and felicitations from a sister school, and a sincere expression of goodwill and good wishes for the future. The Dental Faculty is indeed fortunate to have the sympathetic understanding and the support of President Newton, the Board of Governors of the University and the Provincial Government. There is a tangible evidence of the magnitude of this support in the elaborate new facilities which have been placed at your disposal. The University in turn, is fortunate in having a Dental Faculty staffed by such well trained, virile, ambitious young men. It has been a great pleasure and privilege to hear their clinics and see them in action. I am confident that the dental profession in the Province of Alberta will continue to witness a full measure of success for this school in the years to come, under the very capable leadership of Dean Scott Hamilton. Your ever increasing strength has been and will continue to be a stimulus not only to the practitioners of this province and Western Canada, but also, to dental education across the Dominion. Indeed, your Dean, as Chairman of the Council of Dental Education of the Canadian Dental Association is giving leadership in dental education on a national front.

As this is a gathering of dental practitioners and members of the Faculty, my remarks tonight might be addressed to both groups. We have reason to rejoice over the rapid progress which dentistry has made toward the attainment of full professional status. But lest we become complacent and self-satisfied with our attainments, it is appropriate that we should take cognizance of the opinion expressed recently by a mutual friend and colleague from the East coast, namely, Dr. W. Woodbury[1] (formerly Dean Woodbury) who expressed the view that, "Perhaps the best that can be said for dentistry today is that it is a learning profession. If it is determined to keep on learning it may become a learned profession in time." Some concern and apprehension is in evidence lest we are not ascribed our rightful place among the health professions. Further progress toward the attainment of this objective depends on the willingness and eagerness shown by practitioners and dental educators alike, to accept new responsibilities and new challenges which lie before us in the health field. It would not be healthy for either group to lead the way alone. As T. C. Blegen,[2] Dean of the Graduate School of the University of Minnesota said,

*Presented at the Opening Ceremonies of the new Dental School, University of Alberta, September 21, 1948.

"One of the paramount needs in dental education as in every other kind of professional and advanced education is for the faculties and practitioners to align themselves courageously with the forward march of their profession, to cooperate with the leaders who carry heavy responsibility, to insist upon and not retard, the reforms and advances that link the profession with the future."

Perhaps we, in dental education have not always kept you informed regarding trends in education. This meeting and the activities of the past few days provide substantial assurance of continuing cooperation between organized dentistry and the dental Faculty. I am convinced that you regard the Dental School at the University as a friendly, hospitable home for you to visit; a place interested in its graduates and ready and eager to make a contribution toward the advancement of the profession. I am also confident that your interest and concern for its well being are vital to its future. "It is almost axiomatic that a dental or medical school must have the support of the alumni and the profession if it is to survive."[3]

If the spirit moves you, you will find many worthwhile opportunities to be of assistance to your "Alma Mater". To mention even a few of these opportunities to this audience would be presumptuous on my part.

The history of dentistry during the past 100 years has been sketched by Dean Willard C. Fleming[4] of California, as having advanced through four eras; namely

(1) relief of pain
(2) restoration of teeth
(3) the elimination of infection, and
(4) the control of disease.

Dental education has been to the forefront in the last two stages and will perhaps, to an increasing degree guide the course of the profession into the future. As knowledge of the secrets of "good health" and the causes of incipient dental disease is made available by research, the development of effective preventive measures, will result in radical changes being necessary in dental education, and the practice of dentistry. Therefore, future advancement of the profession toward more active participation as a health profession depends not on increasing trends towards specialization; and not on the development of more refined technical and clinical procedures, (admirable and necessary though they may be), but rather on the degree to which true preventive procedures become routine practice. Such a trend would introduce a fifth era of dentistry, directed towards the preservation of "Positive Dental Health."

On examination, the structures of the oral cavity may give evidence of "positive health" or "negative health". "Positive health" might be defined very simply as *good health,* which implies normal anatomic form, adequate reserve resistance and vitality, and general functional well being. "Negative health", on the other hand, embraces oral disease and dental deficiencies, in varying degrees. The educational preparation for the "negative health" program includes a study of structure (anatomy, and histology); the aetiology and diagnosis of disease, (bacteriology and pathology); the eradication of disease and restoration of affected parts. If we examine critically the curriculum of the majority of the dental schools today, we must realize that the student is educated primarily to cope adequately with "negative dental health". This is a worthy objective, but I venture to say that it cannot remain as the complete objective in the future. It is little wonder then that a very well known lay writer, who was engaged recently to portray the scope of dentistry and dental education, commenced his article with this cryptic, meaningful sentence, "Dentistry is all surgery". Perhaps the term "dental surgeon" which was once so acceptable to the dental profession may yet embarrass us in the future.

When the late Charles H. Mayo said, "Life might well be prolonged ten

full years through dentistry alone," I am reasonably sure he was not thinking in terms of restorative service or other palliative measures designed to alleviate pain and the elimination of infection and disease which is already well established. I believe he envisaged a day when the dental student would be engaged in the study of the biological sciences, primarily to enable him to understand the secrets of good health in the oral tissues (both teeth and supporting structures); and when the graduate would be actively engaged in the practice of safeguarding "positive dental health."

When an oral examination is made of a mouth which appears superficially to be in good health, perhaps we are tempted to be very reassuring about the future prognosis. All too frequently time and hidden forces are unkind to us and rapid retrogression from positive health to negative health occurs. The factors which disturb the delicate balance determining the one state or the other, may be minor, environmental or systemic; they may be local or general. Local influences include such simple changes as the loss of a contact point between teeth; the accumulation of a small piece of calculus in the gingival sulcus and many others.

More complex local disturbances such as general occlusal derangement may result in trauma of the whole dental mechanism.

General influences are associated with changes in general physical health. Perhaps there is a great deal of truth in the statement that "The mouth is often the barometer of general health conditions." The wisdom contained therein is supported by unmistakable clinical evidence, e.g. the early manifestations of various vitamin deficiencies, blood dyscrasias and other general systemic conditions often appear very early in the mouth.

If the mouth tissues do reflect, like a sensitive mirror, the general physical well-being, then the physician's interest in the tongue as an indicator of disturbed health, should be paralleled by the dentist's consciousness and understanding of incipient changes in the hard and soft tissues of the mouth. The whole field of "oral medicine" presents a great challenge to the dental profession and a great opportunity in the public health field. No longer should we accept the term "dental surgeon," we must become "dental physicians" as well.

While it is acknowledged that dental deficiencies and oral disease are seldom alone responsible for death and it is equally true that it is impossible to evaluate the contribution which dental infection may make towards systemic disease, nevertheless the prevention of oral disease is the dental professions positive approach to its obligations in public health services.

The greatest contribution which dentistry can make as a health profession must come through action directed towards safeguarding "positive health." On this contribution our status as one of the important public health professions, may well rest.

"Positive health" of the oral tissues makes possible normal masticatory function, good eating habits, good nutritional status, and the initiation of normal digestive processes, besides the absence of oral infection.

Preventive Dentistry in its broadest sense, which has "positive health" as its supreme objective, might be termed the field of Prophylactodontia. It embraces all aspects of our present knowledge relative to the preservation of good health and must ultimately include presently hidden truths which will be added to our knowledge as they are revealed to us, through biological research. If more of this research were devoted to the positive approach, i.e. seeking an answer to the factors which constitute immunity in the immune, rather than studying disease itself, perhaps more progress might be made.

An adequate training for the dental undergraduate student sufficient to enable him upon graduation to practise Prophylactodontia with confidence, must be founded on a revised approach

to the teaching of such biological sciences as Biochemistry and Oral Physiology. Do not misunderstand me — I am not suggesting for a moment that we discard the teaching of fundamental Biochemistry and Physiology. These subjects and others are essential biological sciences in the dental curriculum. My opinion and that of many of my associates in dental education is that the applied aspects of these subjects must be taught in such a way by dental teachers, that they become living truths, essential to service. I hope to see the day when a dental teacher with the necessary fundamental knowledge and clinical ability, will teach applied biochemistry, applied physiology, applied anatomy, etc., and correlate these subjects with clinical practice. This at once places new demands on dental teachers. There are those who advocate that the dental teacher should have proven his clinical ability in practice, but there are those who believe that "being a good dentist is not sufficient qualification alone for a teacher in dentistry." I believe that the dental teacher must have established his ability as a dental practitioner and should have more than average knowledge of the fundamental sciences, (whether they be biological or basic sciences) upon which the subject he teaches is dependent, so that he may apply the science of dentistry to the art of his profession.

In addition to possessing a command of the Science and Art of his subject, the teacher should be devoted to those he teaches and imbued with the spirit of research. Through his teaching, his personality, his sincerity, he must nurture in his students good judgement and professional skill; a love for truth for the sake of truth; a measure of self-discipline; the ability to think and the development of desirable attitudes towards the profession and society.

If the education of dental students is directed overwhelmingly in terms of the "art" of dentistry, we fail to maintain dental education at the University level.

As we reflect upon some of the thoughts which I have expressed thus far, we might truly join with Dean Fleming[5] when he asks the question, "How can we hold on to all that has been accomplished in the past, and at the same time prepare our students for the future."

The curriculum in most dental schools is now overcrowded. It is unthinkable to attempt to superimpose new requirements on top of the curriculum of today. Furthermore, it is doubtful whether the addition of another year to the course is feasible for social and economic reasons.

Perhaps we have reached the place where we must revise the curriculum so that the undergraduate student would get a sound basic course, both didactically and clinically, leaving some of the professional skill (as in medicine) to be obtained after graduation, perhaps through a year of internship, prior to entering practice. Such an experience would broaden the young graduate's viewpoint of dental public health concepts and enlarge his knowledge of "oral medicine". This thought is not new, and has been given some consideration in recent years by those who are most alert to the future responsibilities of the dental profession.

Already two large and well known dental schools have sought to meet the situation by closer association with the medical school. I fully expect that there will be other Harvard's and Columbia's, as other groups work out the destiny of dental education as they see it.

There is a glorious opportunity for the development of a distinctive Canadian pattern in this field. Perhaps the Council on Dental Education of the Canadian Dental Association will give the leadership and with the cooperation of all Canadian dental schools, evolve a program to meet the challenge presented by a changing social order.

What greater cooperative enterprise could the profession of dentistry through its National organization, and education at the University level, through the Dental Faculties across the Dominion, embark upon, working together in the true spirit of research, which is that spirit which strives to make things better than they are, for the sake of all humanity.

REFERENCES:

1. Woodbury, W. W. "A talk on Dental Education." Journal Canadan Dental Association: 13. 522, November 1947.
2. "Fundamentals of Graduate Education." Journal of Dental Education: 10. 182, April 1946.
3. 5. Fleming, W. C. "The Place of Dental Education in the Dental Profession." Proceedings of the Convocation celebrating the fiftieth Anniversary of the College of Dentistry, November 1947.
4. Fleming, W. C. "Presidential Address." Journal of Dental Education: 11: 10., October, 1947.

ANNOUNCEMENTS

Cancer Control and Oral Diagnosis Lectures

A series of lectures have been arranged by the Faculty of Dentistry, University of Toronto and the Academy of Dentistry, Toronto.

These lectures will take place as follows—

Wednesday, January 19 at 8 p.m.—in the Royal Ontario Museum Theatre.

SUBJECT—Diagnosis and treatment of lesions of the Oral Mucous Membrane, with special reference to Malignancy.

SPEAKER—Dr. Don H. Bellinger, Surgeon-in-chief, Division of Dental Surgery, Henry Ford Hospital, Detroit.

Wednesday, January 26 at 8 p.m.—in room 135, Physics Building, University of Toronto.

SUBJECT—Roentgenographic Interpretation and Pathology of Oral Tumours.

SPEAKERS—Dr. H. M. Worth, Lecturer in Roetgenology, University of Toronto, Dr. W. L. Robinson, Professor of Pathology and Associate Director of Applied Pathology, University of Toronto.

Wednesday, February 2 at 8 p.m.—in Room 135, Physics Building, University of Toronto.

SUBJECT—Surgical treatment of Oral Malignancy.

SPEAKER—Dr. Harold Wookey, Associate Professor of Surgery, University of Toronto.

National Health Week

The fifth annual observance of *National Health Week* has been set for January 30 to February 5.

It is the hope of the sponsors that every organization and every individual in Canada will do something to put across the forthcoming observance of an event which is fast becoming a national institution—and that such cooperation will eventually become of such a character that it will lead to Canada becoming the healthiest nation in the world, something which is not a remote possibility if everyone acquires a "know how" in health matters.

Chicago Dental Society

The regular annual mid-winter meeting of the Chicago Dental Society will be held February 7 to 10, at the Stevens Hotel, Chicago. Hotel reservations should be made early.

EVIDENCE OF LYMPHATICS IN THE PERIODONTIUM*

by KEITH F. BOX, Toronto, Ontario

Introduction

IN VIEW of recent trends in periodontal research, we have thought that a review of evidence should be made to support the belief that lymphatic vessels [1] exist in the periodontal tissues [2].

The lymphatic system plays such a vital role in the body as a whole, that its presence, in part, in the periodontal tissues must be given serious consideration.

It is well known that lymphatics have an important function in the removal of tissue fluids during the normal activity of tissue cells; their importance in fluid exchange and in limiting the dissemination of certain irritants in tissue injury, during the inflammatory process cannot be overestimated.

In addition to reviewing the literature, we will discuss recent attempts to facilitate the identification of lymphatics in ordinary microscopical preparations of the periodontal tissues.

Review of Literature

The sources of evidence provided by the literature may be classified under the following headings:

1. Evidence by Inference; 2. Clinical Evidence; 3. Experimental Evidence.

1. *Evidence by Inference*

Lymphatic vessels exist in almost all mammalian tissues. The important exceptions are the depths of the central nervous system, the peripheral nerve trunks, the parenchyma of the spleen, bone marrow, cartilage, epithelium, the fetal part of the placenta, the umbilicus, the internal ear, the lens, the sclerotic coat of the eyeball and the interfibrous tissue of voluntary muscle (Drinker and Field, 1933, 3-4; Ponder, 1946, 621; Maximow and Bloom, 1931, 370-371; Mallory, 1920, 27; Lambert, 1938, 175; Sobotta, 1930, 149; Smith and Copenhaver, 1944, 334; Noyes and Dewey, 1918, 933; MacGregor, 1936, 1255).

Lymphatics remove fluid and particulate matter from the connective tissue spaces. In so doing, they act complementary to the blood vascular system, from which these substances mainly arise. With this essential function in mind, we believe it is logical to assume that generally wherever a blood supply exists, lymphatics do also, and that the periodontal tissues are not abnormal in this respect.

Nevertheless, this deductive view is not factual proof. Certain authorities, in specific studies of the periodontal membrane, have expressed the improbability that lymphatic vessels exist in this tissue. Hopewell-Smith [3] has stated "a lymphatic system in the periodontal membrane exists only in the imagination of incompetent observers".

2. *Clinical Evidence*

Lymphadenitis is commonly observed to coincide with certain types of periodontal disease. This points strongly to the existence of a continuous lymphatic pathway from the site of the disease to the affected glands.

(1) Throughout this paper, "lymphatic vessels" will refer to lymphatic capillaries and the smaller lymphatic vessels with walls consisting only of endothelial cells. The term "lymphatics" will also be used in this regard.

(2) The term "periodontal tissues", unless otherwise stated, will refer to the gingivae and periodontal membrane only; the tissues of the alveolar process thereby being excluded.

(3) Hopewell-Smith, 1918. On Healthy and Diseased Conditions of the Alveolar Processes of the Jaw. Dental Cosmos, 60, 426.

*A Paper Submitted for Credit in the Second Dental Year, Faculty of Dentistry, University of Toronto, 1947-1948.

However, this fact is not positive proof. For instance, it might be argued that channels other than lymphatics, e.g. cleavage lines, drained the irritants from the periodontal tissues to join, farther on, afferent lymphatics of the involved glands. Also, it is possible that irritants from a clinically unobserved lesion were draining to the glands, and, assuming that lymphatics do not exist in the periodontal tissues, some might argue that this other lesion was solely responsible for the glandular condition.

3. *Experimental Evidence*

The injection and insufflation techniques have been used in the experimental study of lymphatics of the periodontal tissues.

A. The Injection Technique

By this method, pigmented materials are injected, usually under pressure, into the tissues. The blood vessels are injected with a contrasting material. Subsequent dissection or microscopic preparation reveals the pigment lying within vessels, or vessel-like structures.

Sappey (1874) injected mercury into dead animal and human tissues, and described the lymphatics, thereby, of the mouth, cheeks and lips. He illustrated what he believed to be lymphatic capillaries in the connective tissue papillae of the gingival mucosa, and traced their downward extension in the submucosa over the buccal and lingual aspects of the alveolar process. He limited his description to tissues occlusal to the ligamentum circulare.

Schweitzer (1907) was the first to report successful injection of lymphatic vessels in the periodontal membrane. He injected the Gerota mass into dead premature fetuses and demonstrated lymphatics passing from the gingivae to lymph nodes via the periodontal membrane. He observed that the gingival lymphatics had a superficial relation to the neighbouring blood vessels, which is the reverse of the general arrangement.

Noyes (1913, 1920 and 1927) and Noyes and Dewey (1918) reported the results of their extensive investigations of the lymphatics of the dental region based upon a duplication of Schweitzer's technique. The injections were made into the gingivae of dead young dogs. They observed that, whereas the lymphatics of the buccal and lingual slopes of the gingivae passed over the periosteal face of the alveolar process, those from the base of the sulcus penetrated the ligamentum circulare and passed through the periodontal membrane towards the tooth apex.

MacGregor (1936) reported his experiments in which lead acetate solutions were injected into live animals. After placing wool pledgets soaked in these solutions in incisions of the sulcus base, he observed that the salt passed through the periodontal membrane, and stated that it was there contained within lymphatic vessels. He observed, further, that the salt passed to the lacunae and canaliculi of the alveolar bone from the membrane.

B. The Insufflation Technique

Box (1948) filled the gingival sulci of sheep with toluidin blue, then insufflated with oxygen. Microscopic preparations exposed to the air clearly revealed certain structures outlined by the dye, and these were assumed to be lymphatics.

From the nature of this experimental evidence, one must conclude that there is a lymphatic connection between the periodontal tissues and the regional lymph glands. However, the lymphatic capillaries and smaller lymphatic vessels are extremely subject to destruction by pressure, and the experimental techniques generally used make some of the finer observations questionable.

Evidence Based upon Study of Ordinary Microscopical Preparations

We will use the term "ordinary microscopical preparations" to mean those preparations in which the tissues have not been subjected to any differentiating technique other than

that customarily followed in the routine course for microscopical study.

The common view is that the smaller lymphatics, particularly the capillaries, are seldom seen in ordinary histological preparations (Maximow and Bloom, 1931, 371; Bohm and Davidoff, 1909, 224; Hewer, 1937 138; Lambert, 1938, 175).

In carefully prepared decalcified sections of the periodontal issues, we believe these vessels to be readily seen.

The common view is based on the tendency of these vessels to collapse, and this, in turn, is attributed mainly to two factors:

(a) the delicacy of the endothelial lining

(b) the absence of formed elements in the lymph.

It is generally agreed that there are only slight structural differences between the endothelium lining the smaller lymphatics and that of the blood capillaries [1] (Drinker and Field, 1933, 6; Bohm and Davidoff, 1909, 224; Maximow and Bloom, 1931, 371; Menkin, 1947).

In view of the patency exhibited by blood capillaries in the same preparations, we would not refer the lymphatic collapse to these fine differences.

The commonly observed regular patency of blood capillaries in regions where there is a sparsity of formed elements in the preparations militates strongly against the idea that an equivalent condition in lymphatics is an important factor in bringing about their collapse.

In life, when the tissue turgor pressure rises (oedema), the lymphatics tend to remain open, apparently by means of the connective tissue attachments of their walls (Ponder, 1946, 622). The presence of the lymph fluid, too, must be largely responsible in this regard.

Shrinkage of soft tissues does occur during the process of preparing them for microscopical study, but at least some of the forces set up by this contraction must act to pull vessel walls outwards. In any case, we do not agree that shrinkage or the factors proposed in support of the common view would work towards the complete collapse of lymphatics while affecting the blood capillaries only slightly, especially if each type of vessel was fully patent at the time of tissue fixation prior to sectioning.

For examples of ordinary preparations showing patent lymphatics, we refer the reader to Menkin, 1940, pages 185, 186, 192 and 196. In so far as our purpose is concerned, the tissues illustrated may be considered normal.

The periodontal membrane is a soft tissue situated between two hard structures, namely the cementum and the alveolar bone. Conditions here would seem to be more favourable for maintaining vessel patency during the preparations of sections than in a wholly soft tissue structure, and lymphatics are readily seen through its length. Patent lymphatics are clearly evident in the gingivae also, although the hard tissue relationship existing in the membrane is not present.

Black (1887) described cell nests in the membrane, and referred to them as "lymphatic glands." Possibly these were the epithelial cell rests of Malassez. Black (1899) described cells in the periodontal membranes of sheep which he termed "lymph" cells lining "lymph canals," and apparently observed inflammatory cellular infiltration related to them.

Ebner (1909) described reticular structures containing "lymphoid" cells in the periodontal membrane, and regarded these as part of the lymphatic system. Again, there is the possibility that these were epithelial cell rests.

Fischer (1910) stated that lymphatic vessels were present around the roots of teeth.

Bodecker [1] gave an excellent account of lymphatics of the dental pulp.

(1) Throughout this paper, "blood capillaries" will refer to arterial, ordinary and venous capillaries of the blood vascular system.

We quote it in full because it is one of the earliest references in the dental literature to lymphatics based upon study of ordinary microscopical preparations. Bodecker stated "as to lymphatics of the pulp, I can say that in some specimens I have seen branches of vessels of the size of veins without an adventitial coat, and composed of large, flat, slightly-protruding endothelia. These vessels I believe to be lymphatics, as they contained a finely-granular coagulated albumen, scanty granular corpuscles, and a very limited number of blood corpuscles. As to the distribution of lymphatics, I must abstain from positive statements."

Noyes (1921) gave a general description of the lymphatic system, its parts and origin, the lymph glands of the head and neck and lymphatics of the lips, mouth, gums, periodontal membrane, dental pulp and tongue. With little change, this description is presented by Noyes, Schour and Noyes (1942), and it is the most complete general summary of this type in the dental literature. However, it offers no evidence based on ordinary microscopical preparations.

Turner and Drew (1920) demonstrated the presence of certain microorganisms within channels, in gingival tissue, which they termed "lymphatic spaces."

Beckwith, Simonton and Williams (1925) have depicted damaged "lymph channels" in inflammatory gingival tissue.

Box (1948) has stated that lymphatics are readily observable in such preparations of the periodontal tissues.

During the study of sections of human tissue exhibiting an acute type of periodontal disease, Box found long meandering tracts in the gingivae and membrane which apparently carried a necrotizing agent through these tissues. On the assumption that these tracts might be related in some way to the lymphatic drainage, work was carried out to ascertain the structural aspects of lymphatics in ordinary preparations. In collaboration with Dr. Valy Menkin, it was concluded that lymphatic vessels here were readily seen. Meanwhile, further study has been made in an attempt to facilitate the identification of these vessels. A summary of this study is presented in a later section.

It is by microscopical study of periodontal tissues involved by certain phases of the inflammatory process that lymphatics are most strikingly revealed.

Among other things, the inflammatory process aims at the circumscription of irritants, and its course is mainly a function of the involved agent. Certain irritants incite the tissue to a severe reaction, one of the earliest stages of which is the fixation phenomenon (Menkin, 1940, 115). Tissue fixation includes either or both of two processes in varying degrees:

(a) fibrin deposition in the oedematous extracapillary spaces

(b) thrombosis of the afferent lymphatics.

Dependent on the nature of the inflammatory process, microscopical preparations show lymphatics at all stages from the fully patent state to that of total occlusion by thrombi. The lymphatic thrombus is characteristic, and a description appears in the following section.

The Histological Aspects of the Smaller Lymphatics

1. *Wall Characteristics*: For practical purposes, the endothelial cells lining these vessels may be regarded as indistinguishable from those of the capillaries of the blood vascular system. Actually, authorities describe slight differences between the two types, but these differences usually are neither effective nor important in the identification of lymphatics. The important point is that the lymphatic is lined by

(1) Bodecker, C.F.W., 1894. The Anatomy and Pathology of the Teeth, The S. S. White Dental Manufacturing Co., 251.

endothelial cells, the identification of which, in histological sections, often requires attentive study. In section, the lymphatic endothelial cell presents two main elements, namely the nucleus and the cytoplasm.

(a) *The sectioned nucleus*:
- (1) Stains blue with hematoxylin-eosin.
- (2) Contour is adapted to the lumen; thus it is commonly comma, crescent or spindle-shaped.
- (3) Protudes slightly into the lumen.
- (4) In carefully prepared sections is observed to contain stained bodies.
- (5) Contour, length and thickness are, in all cases, dependent on the section plane.

(b) *The sectioned cytoplasm*:
- (1) Appears, usually, as a thin, dark line expanding to include and blend with the nucleus.
- (2) Abuts directly against the surrounding connective tissue.

In transverse sections, in which only one or two endothelial nuclei are cut, care must be taken to determine that the nuclei in question belong to the vessel lining and are not those of adjacent connective tissue cells which often resemble the endothelial nuclei in contour and may be separated from the vessel lumen only by the thickness of the lining cytoplasm. This problem does not usually occur in longitudinal sections of the vessels, since more endothelial nuclei are available for study.

Compared to a venous capillary of similar caliber, the lymphatic wall is usually the thinner of the two.

2. *Formed Elements of the Lymph*: The difference in types of formed elements observed in the lumina of blood

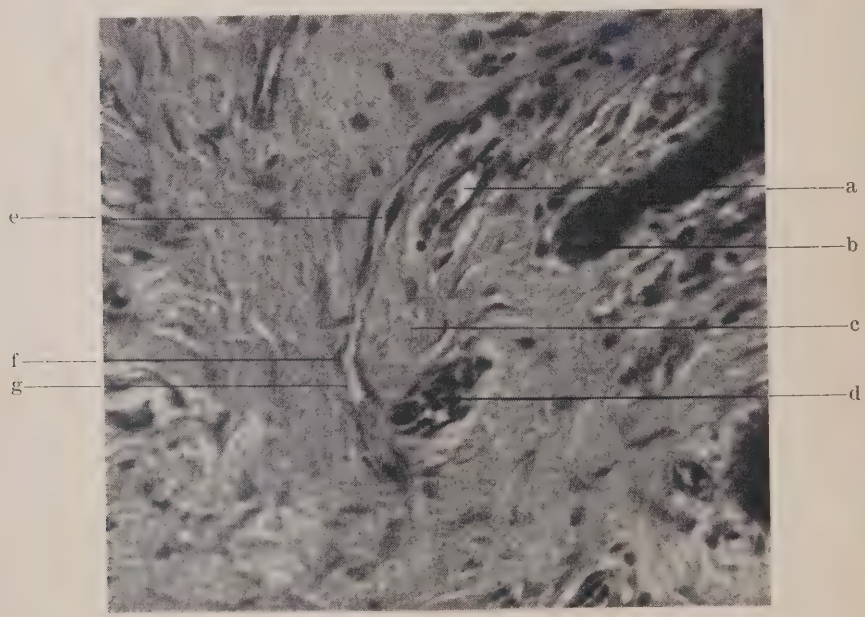

FIG. 1

Lymphatic draining a connective tissue papilla near crest of normal gingiva.

a, d. blood vessels; b. epithelium; c. fibrous connective tissue; e. lymphatic lumen; f. endothelial cell nucleus of lymphatic wall; g. endothelial cell cytoplasm.

NOTE: Figs. 1 and 2 are both of the labial slope of the gingiva.

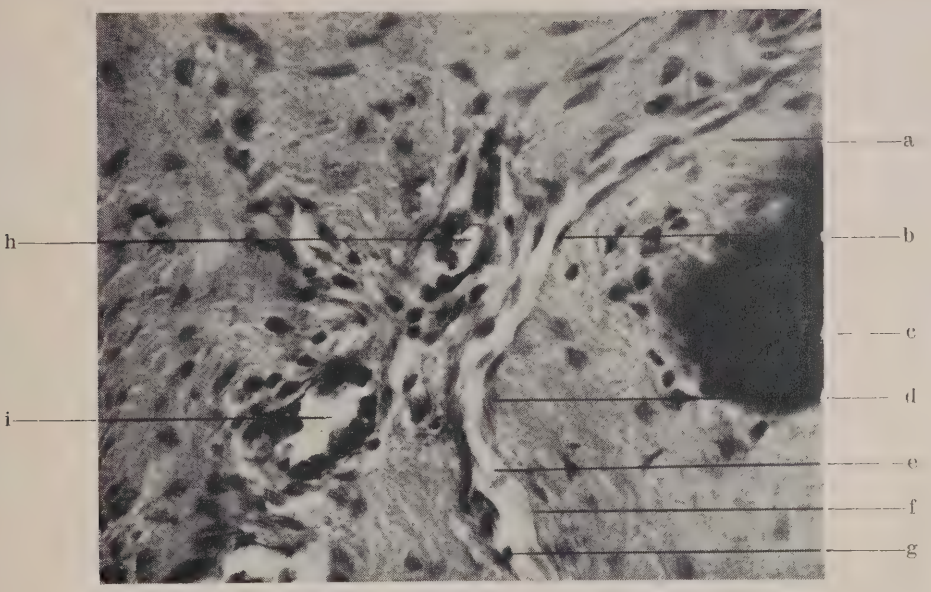

FIG. 2

Lymphatic draining a connective tissue papilla near crest of normal gingiva.

a. fibrous connective tissue; b. endothelial cell nucleus; c. epithelium; d. connective tissue cell close to lymphatic wall; e. lymphatic lumen; f. endothelial cell cytoplasm of lymphatic wall; g. mononuclear leucocyte; h, i. blood vessels.

capillaries and lymphatics serves as a key factor in the identification of these vessels, and the difference is modified by the state of the tissue concerned.

In injury-free tissue, the lymph in peripheral lymphatics contains few erythrocytes (Drinker and Field, 1933, 125). The total cell count of unfiltered peripheral lymph is about 500 cells per cu. mm. (Ponder, 1946, 626). The lymphocyte is predominant, with large mononuclear leucocytes and eosinophiles present in smaller numbers.

The minority of erythrocytes in the smaller lymphatics is so marked that this cell may be regarded as absent in microscopic preparations. This fact may be used as an index in differentiating lymphatics from blood capillaries.

Menkin (1947) stated that the probabilities of an erythrocyte being present in the smaller lymphatics and absent in blood capillaries in histological sections of normal tissue are so remote that its absence or presence identifies these vessels without question for all practical purposes, provided that the other essentials are fulfilled.

In injured tissue, erythrocytes and leucocytes are present in greater numbers in the lymph. However, in this case, the erythrocyte-leucocyte ratio is of such a small order, compared to that of a blood capillary, that it may still be used as an index to the identity of the vessel concerned.

3. *Other Contained Elements*: In the fully patent state, lymphatics in normal or inflammatory tissue usually contain no characteristic substance, apart from the formed elements, which would aid in their identity. In certain stages of the inflammatory reaction, however, when the lymphatic patency decreases progressively to a state of total blockade, the appearance of the material contained in the lumen is a valuable factor.

The serous material which is the pre-

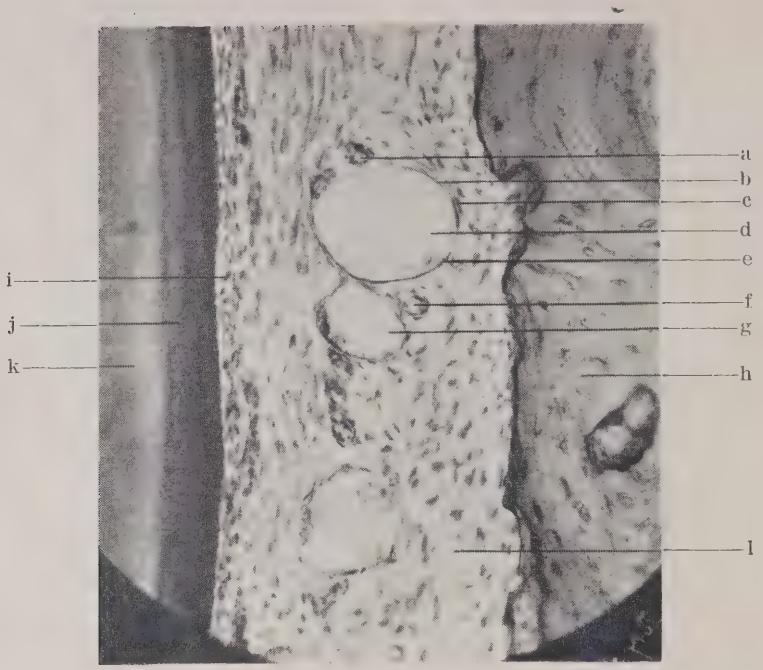

FIG. 3

Lymphatic vessel in a normal periodontal membrane.

a, f, g. blood vessels; b. endothelial cell cytoplasm of lymphatic wall; c. connective tissue cell close to lymphatic wall; d. lymphatic lumen; e. endothelial cell nucleus of lymphatic wall; h. alveolar process; i. cementoblast; j, cementum; k. dentine; l. fibrous connective tissue of membrane.

cursor of the actual fibrinous reticulum of a blockaded lymphatic stains a uniform rosy-pink with hematoxylin-eosin. The actual reticulum is delicate, homogeneous and usually fills the lumen. Nodes at the intersections of the fibrin strands are often conspicuous. The low erythrocyte-leucocyte ratio and the absence of platelets make this thrombus typical.

4. *Vessel Caliber*: The inside-diameter, or caliber, of the smaller lymphatics is usually greater than that of a blood vessel of equivalent wall thickness; and, whereas the caliber of a blood capillary is relatively constant, that of the lymphatics tends to increase and decrease over short distances.

5. *Valves*: Most authorities have stated that valves appear in lymphatics coincident with the appearance of smooth muscle fibres in the vessel wall, and on this basis the distinction between lymphatic capillaries and the larger lymphatic vessels is usually made. The valves occur in pairs, with the apposed free ends pointed in the direction of the lymph flow. Under these conditions, the valves are stated to be outgrowths of the intima.

As a general rule, valves are more numerous in lymphatics than in veins, and, in the gross view, give the lymphatic vessel a beaded appearance.

6. *Dilatations*: Dilatations occur in lymphatic capillaries at the junction points. This contrasts with the more clean-cut junctions of the smaller blood vessels.

7. *Terminations*: Whereas the blood vascular system is a continuous closed network generally, the lymphatic sys-

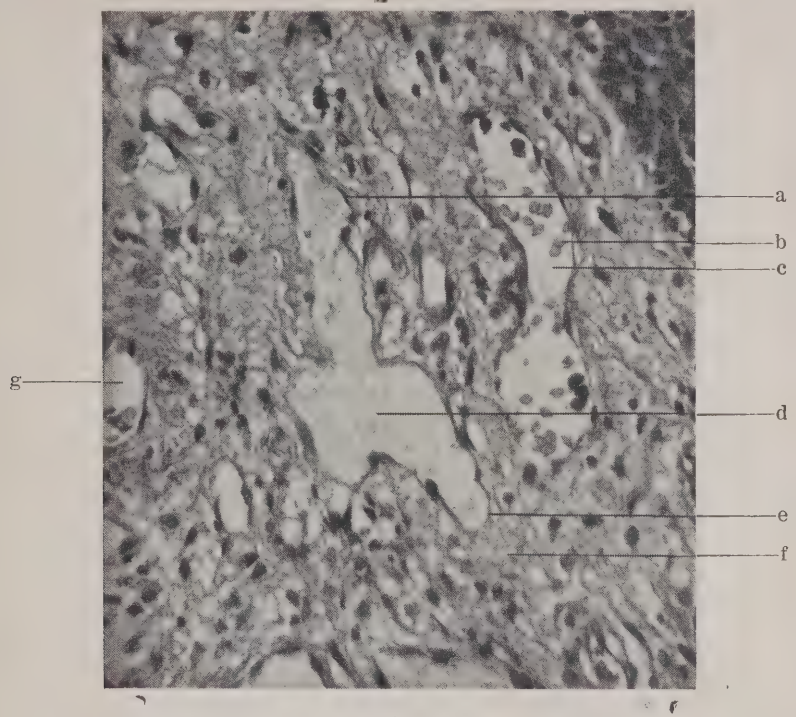

FIG. 4

Thrombosed lymphatic vessel in lesion of necrotic gingivitis.

a. endothelial cell nucleus of lymphatic wall; b. erythrocyte; c. lumen of blood vessel; d. lymphatic lumen occluded by a delicate fibrinous reticulum; e. endothelial cell cytoplasm of lymphatic wall; f. extracapillary tissue interlaced with coagulated plasma; g. blood vessel.

tem, while closed, terminates blindly in the tissues. The blind projections are pointed, swollen or round.

8. *Adjoining Connective Tissue Elements*: (a) *Pericytes*: The pericapillary mesenchymal cells observed in the connective tissue bordering the blood capillary wall, and to which a contractile function is attributed in certain instances, are not seen in the tissue adjoining lymphatics.

(b) *Membranous Sheath*: Blood capillaries are surrounded by a thin membranous sheath composed of layers of collagenous or reticular fibres. No such tissue organization is readily apparent with regard to lymphatics, although Sobotta (1930) has claimed that a precollagenous reticulum may be demonstrated in or adjacent to the endothelial lining of these vessels.

Photomicrographs of Lymphatics in the Periodontium

Eight photomicrographs are submitted to depict the appearance of lymphatic vessels in ordinary microscopical preparations of the periodontal tissues. These were reproduced with the kind permission of the Department of Periodontal Research, Faculty of Dentistry, University of Toronto.

The tissues illustrated were decalcified, processed in celloidin and stained with hematoxylin-eosin.

The Question of Lymphatics in the Alveolar Process

It has been mentioned previously in this paper that lymphatics have not been demonstrated in bone marrow.

Large spaces lined with endothelium and surrounding the blood vessels of

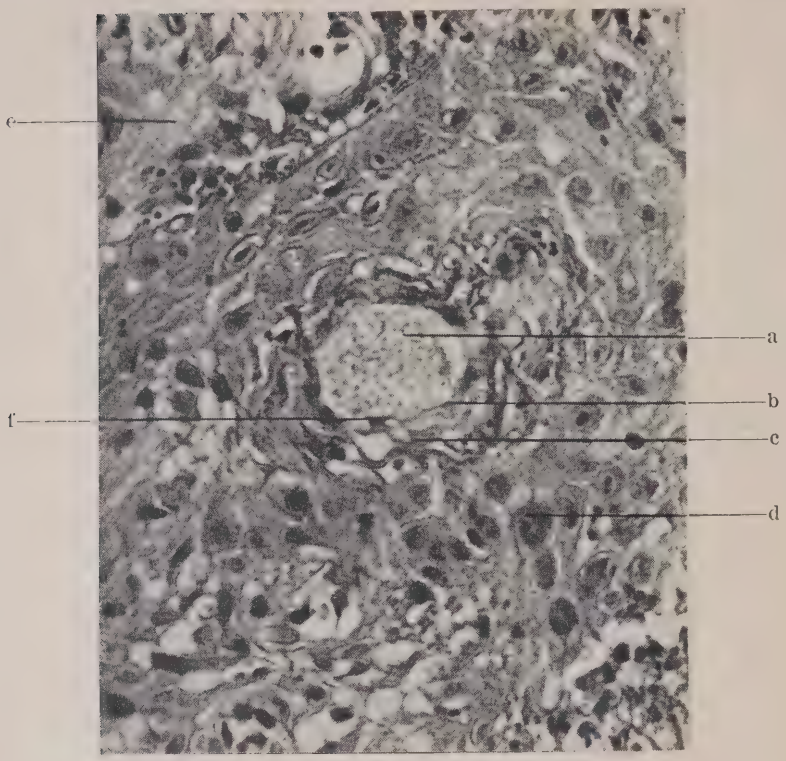

FIG. 5

Thrombosed lymphatic vessel in lesion of necrotic gingivitis.

a. lymphatic lumen occluded by a fibrinous reticulum; b. endothelial cell cytoplasm of lymphatic wall; c. condensed fibrous connective tissue; d. epithelium; e. fibrous connective tissue with fibrin mesh; f. endothelial cell nucleus of lymphatic wall.

Haversian canals have been described (Bohm, Davidoff and Huber, 1905, 224).

MacGregor demonstrated his injection material in the lacunae and canaliculi of the alveolar bone. (This material was found also in the dentinal tubules of adjacent teeth). Strictly speaking, the fluid bathing the osteocyte and the odontoblast and their processes is tissue fluid; the term "dental lymph" has been used frequently to refer to a fluid within the dentinal tubules. However, lymph is found only within the closed lymphatic system, and, in this sense, the term "dental lymph" is a misnomer.

REPORT OF CRITICAL LACK OF LYMPHATIC HISTOLOGY IN THE DENTAL LITERATURE

We wish to report, now, the very serious lack of reference in dental textbooks to the presence, structure and function of periodontal lymphatics based upon the study of ordinary microscopical preparations of normal and pathological tissues.

Bodecker (1894), Broomell (1902), Hopewell-Smith (1918), Humphreys and Wellings (1923) and Beust (1934) made no reference.

The remaining textbooks refer briefly to the fact that lymphatics are present in the periodontal tissues, some basing the reference solely upon the experimental work of Sappey, Schweitzer and Noyes and Dewey.

Orban (1944) has devoted four lines to the subject of lymphatics in relation to the periodontal membrane, making

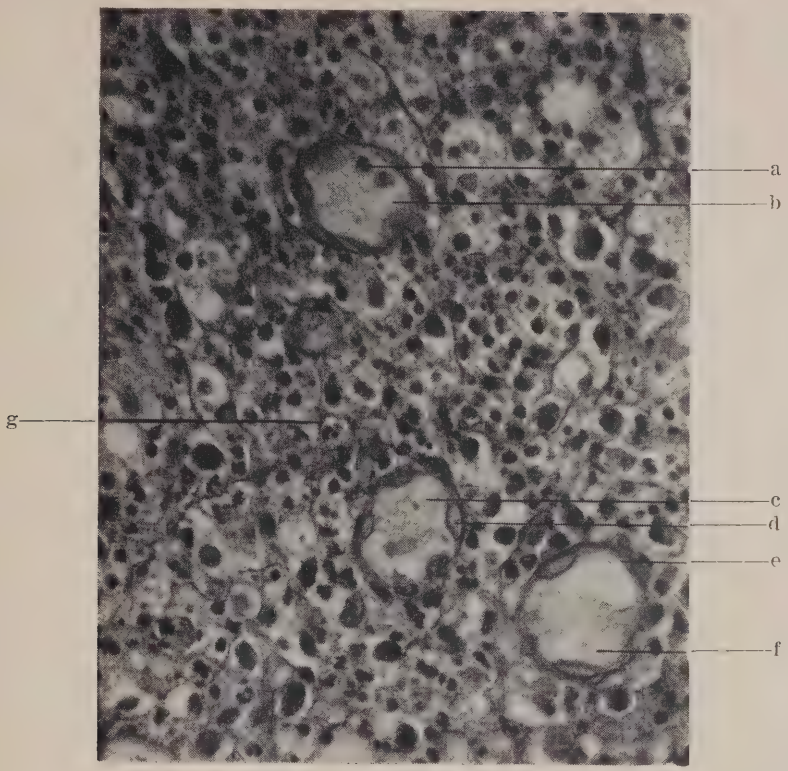

FIG. 6

Thrombosed lymphatic vessels in an acute alveolar abscess.

a. polymorphonuclear leucocyte; b, c, f. lymphatic lumina occluded by fibrinous thrombi; d. large pale-staining nucleus of cell within lumen, probably a macrophage; e. endothelial cell cytoplasm of lymphatic wall; f. fibrinous reticulum; g. extracapillary tissue with fibrin mesh.

NOTE: This is an acute inflammatory reaction exhibiting fixation in which both the lymphatic blockade and the extracapillary fibrin network are factors. Note also the nodes at the intersections of the fibrin strands within the vessels.

no reference to their presence in the gingivae.

Conclusions

The literature offers substantial evidence that lymphatic vessels do exist in the periodontal tissues; this arises from inference, clinical observation and experiment.

In contrast to the common view that lymphatic capillaries and the smaller lymphatic vessels are seldom seen in ordinary histological preparations, we believe these vessels to be readily seen in well-made sections of the gingivae and periodontal membrane.

There is a significant lack of lymphatic histology in the dental textbooks. In view of the extremely vital roles played by lymphatics both in health and disease, the gravity of this situation cannot be exaggerated.

Summary

Recent trends in periodontal research point towards the need of a better understanding of the lymphatics of the periodontium. This paper is designed to gather evidence that lymphatics do exist in the periodontal tissues.

By inference, lymphatics would seem to be present, since these tissues have a normal blood supply, and the lymphatic

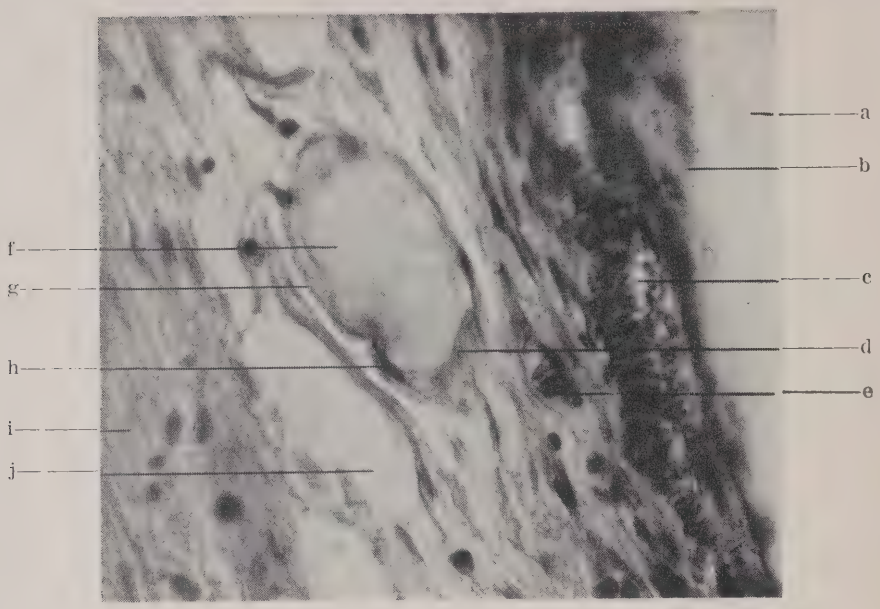

FIG. 7

Lymphatic vessel in connective tissue capsule of an erupting permanent cuspid tooth.
a. space between capsule and bone; b. fibrous connective tissue formerly adjoining bone; c. congested blood vessel; d. endothelial cell nucleus of lymphatic wall viewed flatly; e. blood vessel; f. lymphatic lumen filled with a serous material; g. endothelial cell cytoplasm of lymphatic wall; h. endothelial cell nucleus of lymphatic wall viewed in transverse section; i. fibrous connective tissue adjoining reduced enamel epithelium; j. space.

and blood vascular systems function as complements in almost all tissues of the body.

Clinical and experimental observations offer proof that irritants and injected materials reach the regional lymph glands from the periodontal tissues. Microscopic sections of injected and insufflated tissue show the inserted materials lying in vessels and vessel-like structures which are assumed to be, and probably are, lymphatics.

Lymphatics are readily seen in ordinary microscopical preparations of normal and pathological tissues of the periodontium.

The histological aspects of lymphatics are discussed in some detail. The histological approach, we believe, is the soundest, most feasible and most direct, and the grave lack of such an approach in the dental literature is critically reported.

Photomicrographs of periodontal lymphatics in normal and pathological tissues are presented.

The question of lymphatics of the alveolar process is briefly discussed.

BIBLIOGRAPHY:

BECKWITH, SIMONTON and WILLIAMS, 1925. A Histologic Study of the Gum in Pyorrhea. J.A.D.A., Vol. XII, 129.
BEUST, 1934. Dental Histology and Embryology. W. B. Saunders Company.
BLACK, 1887. A study of the Histological Character of the Periosteum and Peridental Membrane.
BLACK, 1899. The Fibres and Glands of the Peridental Membrane. Dental Cosmos, Vol. XLI, 101-122.
BLACK, 1902. Descriptive Anatomy of the Human Teeth. The S. S. White Dental Manufacturing Co.
BODECKER, C.F.W., 1894. The Anatomy and Pathology of the Teeth. The S. S. White Dental Manufacturing Co.
BODECKER, Charles F., 1944. The Fundamentals of Dental Histology and Embryology Including Clinical Applications. Columbia University Press.
BOHM, DAVIDOFF and HUBER, 1905. A Text-Book of Histology. W. B. Saunders & Company.
BOX, 1948. Concerning the Pathogenesis of Periodontal Disease. J. Periodont, 19, 11.
BROOMELL, 1902. Anatomy and Histology of the Mouth and Teeth. P. Blakiston's Son & Co.
CHURCHILL, 1935. Meyer's Normal Histology and Histogenesis of the Human Teeth

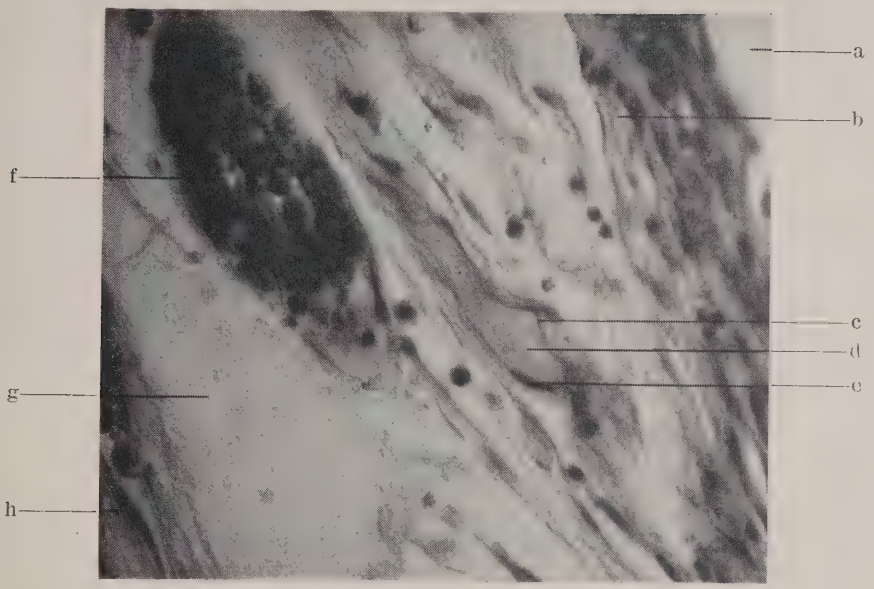

FIG. 8

Lymphatic vessel in connective tissue capsule of an erupting permanent cuspid tooth.

a. space between capsule and bone; b. fibrous connective tissue formerly adjoining bone; c. endothelial cell cytoplasm of lymphatic wall; d. lymphatic lumen filled with a serous material; e. endothelial cell nucleus of lymphatic wall; f. congested blood vessel; g. space; h. fibrous connective tissue adjoining reduced enamel epithelium.

and Associated Parts. J. B. Lippincott Company.
DRINKER and FIELD, 1933. Lymphatics, Lymph and Tissue Fluid. The Williams & Wilkins Co.
DIAMOND, 1929. Dental Anatomy. The Macmillan Company.
EBNER, 1909. Weichgebilde der Zaehne. Scheff's Handbuch der Zahneilkunde. Vienna and Lepzig, 1, 269.
FISCHER, 1910. Bau und Entwicklung der Mundhohle des Menschen.
HOPEWELL-SMITH, 1937. Text-Book of Histology for Medical Students. William Heinemann (Medical Books) Ltd.
HOPEWELL-SMITH, 1918. Normal and Pathological Histology of the Mouth. P. Blakiston's Son & Co.
HUMPHREYS and WELLINGS, 1923. A Text-Book of Dental Anatomy and Physiology. Edward Arnold & Co.
KRONFELD, 1933. Histopathology of the Teeth and their Surrounding Structures. Lea & Febiger.
LAMBERT, 1938. Introducton and Guide to the Study of Histology. P. Blakiston's Son and Co., Inc.
MacGREGOR, 1936. An Experimental Investigation of the Lymphatic System of the Teeth and Jaws. Proc. Royal Society of Medicine, Jour. Odont., Vol. XXIX, No. 6.
MALLORY, 1920. Principles of Pathologic Histology. W. B. Saunders Company.
MAXIMOW and BLOOM, 1931. A Text-Book of Histology. W. B. Saunders Company.
MENKIN, 1940. Dynamics of Inflammation. The Macmillan Company.
MENKIN, 1947. Personal communication.
MUMMERY, 1924. The Microscopic & General Anatomy of the Teeth. Oxford University Press.
NOYES, 1920. Pathological Changes in the Peridental Membrane. Jour. Nat. Dent. Ass., Vol. 7, 123.
NOYES, 1921. A Text-Book of Dental Histology and Embryology. Lea & Febiger.
NOYES, 1927. A Review of the Work on the Lymphatics of Dental Origin. J.A.D.A., Vol. 14, 714.
NOYES and DEWEY, 1918. The Lymphatics of the Dental Region. Dent. Summary, Vol. 38, 933.
NOYES, SCHOUR and NOYES, 1942. A Text-Book of Dental Histology and Embryology. Lea & Febiger.
ORBAN, 1944. Oral Histology and Embryology. C. V. Mosby Company.
PEAKE, 1922. Notes on Dental Anatomy. Claudius Ash, Sons & Co., Ltd.
PIERSOL, 1910. Normal Histology. J. B. Lippincott Company.
PONDER, 1946. Howell's Textbook of Physiology. W. B. Saunders Company.
SAPPEY, 1874. Anat. Phys. Path. des Lymphatiques, considerées chez l'homme et les Vertébrés, Paris.
SCHWEITZER, 1907. Uber die Lymphgefaesse des Zahnfleisches und der Zaehne beim Menschen und bei Saeugetieren, Arch. f. mikrosk. Anat. in. Entwicklung., 69, 807.
SMITH and COPENHAVER, 1944. Bailey's Text-Book of Histology. The Williams & Wilkins Company.
SOBOTTA, 1930. Textbook of Human Histology and Microscopic Anatomy. Tr. by Piersol. G. E. Stechert & Co.
TOMES, 1923. A Manual of Dental Anatomy. The Macmillan Company.
TURNER and DREW, 1920. An Experimental Inquiry into the Bacteriology of Pyorrhoea. Brit. Jour. Dent. Sci., 63, 172.
WIDDOWSON, 1946. Special or Dental Anatomy and Physiology. Staples Press Limited.

EXCISION OF THE ABNORMAL FRENUM*

by WILLIAM W. BRESLIN, Toronto, Canada

IN THE surgical preparation of the mouth for full dentures, the muscular attachments are very often neglected. Only after many attempts to seat a denture have failed, do these muscles receive their proper attention. It should therefore be a routine procedure to remove this interference at the time the teeth are extracted and the alveolectomy performed. A simple procedure for such an operation is herein described.

A. *Anaesthesia*: Infiltration is preferred using a freshly prepared solution with a high pH. While not advocating any particular anaesthetic, monocaine 1½% has worked very satisfactorily in our office.

B. *Surgical Procedure*:

1. The upper lip is pulled upward and forward tensing the frenum muscle. *Fig.* 1.
2. A sharp lancet is placed in a horizontal position at the point of attachment to the gingival crest in the median line. *Fig.* 2.
3. With the lip still tensed a horizontal incision is made very slowly, releasing the fibres of the muscle until the frenum is freed from the gingivae. When this is accomplished, the lip is allowed to move upward and backward, and the incision has the appearance of an ovoid shape. *Fig.* 3.
4. The upper border of the incision will show a small triangular tag attached to the mucous membrane. This should be removed with a pair of sharp scissors.

C. *Suturing*: The edges of the incision are sutured to prevent attachment along the original lines, but are not supposed to be brought into direct contact. Three sutures are therefore placed across the wound, one at its widest diameter, one above and one below. *Fig.* 4. The material may be dermal or catgut 00 and the completed suture should be interrupted.

D. *Post-Operative*: Since there is no unnecessary laceration of tissue, healing is very uneventful and the

FIG. 1
Side view of frenum before operation.

FIG. 2
Lancet in horizontal position.

*Clinical demonstration presented at the September meeting of the American Society of Oral Surgeons, Chicago, Ill.

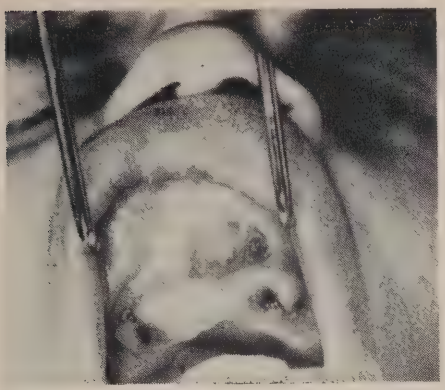

FIG. 3
Ovoid shape of wound after incision.

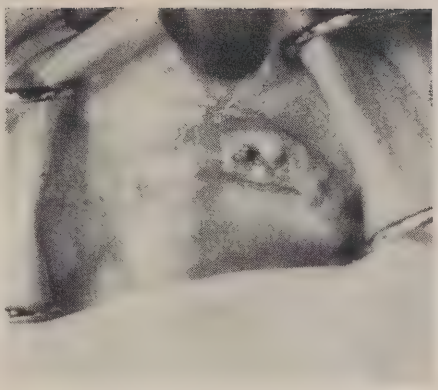

FIG. 4
Sutures in place, frontal view.

frenum is ready for the denture in a week. Normal saline mouth washes every half hour will prevent any unusual swelling.

206 Bloor St. W.

ANNOUNCEMENTS

Graduate Course in Orthodontics

A graduate course in Orthodontics, of one-year duration, given in the English language, will begin on September 15, 1949, at the Université de Montréal. As the number of candidates is limited to ten, applications should be sent in as soon as possible for the coming year.

Any information regarding this course and all applications should be mailed to:

Doctor Paul Geoffrion, *Vice-Dean,*
Head of Orthodontic Department, Faculty of Dental Surgery,
Université de Montréal, 2900 Mount Royal Blvd.,
Montreal (26), Que. Canada.

Mid-Atlantic Seminar in Oral Medicine

This Seminar will be held May 22-27, 1949, at the Skytop Club, Skytop, Pennsylvania. It is being offered by the Postgraduate Division of the University of Pennsylvania School of Dentistry.

The fee for this Seminar including registration, lodging and meals for the 5 days is $250.00.

Further information can be obtained from Dr. L. W. Burket, Postgraduate Division, School of Dentistry, Univ. of Pennsylvania, 4001 Spruce St., Philadelphia 4, Penn.

American Academy of Oral Pathology

This Academy will hold its annual meeting at the Stevens Hotel, Chicago, Illinois on February 6, in Private Dining Room 2. Discussions of various phases of Oral Pathology will be presented by members and guests. A banquet will be served on Sunday evening, February 6, in the same room. All interested dentists, physicians and pathologists are invited to participate in the meeting.

Tribute to Dr. Arnold D. A. Mason, F.A.C.D.

Dean Emeritus, Faculty of Dentistry, University of Toronto

I'd rather bring a flower
To a friend at any hour
Than to scatter roses white and red
On his casket when he's dead.

IT WAS in these words that Dr. Arthur Walsh of McGill University expressed the feeling of the group assembled at dinner to do honour to their friend and colleague, Arnold Mason. Dr. Walsh continued to say it was a magnificent meeting with a wonderful atmosphere of good fellowship, all of which was in keeping with the purpose of the gathering—to do honour to one who has given his life to dental education.

Dr. Harvey W. Reid was toast master and he unfolded a unique program which kept everyone smiling. He set out to eulogize the guest of honour but was interrupted here and there by some of his intimate friends in the persons of Mr. Charles McKenna, Dr. Harold Campbell, Dr. J. M. Sheldon, Mr. Fred S. Haines and Dr. R. P. Lowery. These gentlemen acting a character part of "Vignettes" very humourously refuted any statement of accomplishment attributed to Dr. Mason much to the enjoyment of those assembled and perhaps most of all to the centre of attraction himself.

The party which taxed the accommodation of the Albany Club to capacity, included members of Dr. Mason's family, friends in the business world, in the Arts and Letters Club, the St. George's Society, the University Staff, the Dental Trades Association, the Dental Technicians and many colleagues.

Rev. Dr. H. J. Cody, a former president and chancellor of the University of Toronto, and who was the principal speaker of the evening, spoke of Dr. Mason as a man with many facets. The pinnacle of his achievements perhaps was his contribution to dental education. He served as Dean of the Faculty in Toronto from 1936 to 1947 following in a long line of distinguished occupants of the Dean's chair—Dr. J. B. Willmott, Dr. A. E. Webster and Dr. Wallace Seccombe. He was a man of high moral and professional ideals and he constantly endeavoured to inculcate these principles in his students.

Dr. Mason was a graduate of Chicago School of Dental Surgery in 1901, and in the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1902. On graduation he became a member of the College Staff and has continued as a teacher throughout his career. His leadership in dental education was well recognized in the Dominion Dental Council where he served as Secretary for many years, in the Council on education of the Canadian Dental Association and in the American Association of Dental Schools where he served as its President in 1947. In keeping with his advancement as a teacher and with the progress he made in grasping the needs of dental education he developed a fine executive ability. This served him well in the number of years on the Board of the Royal College of Dental Surgeons of Ontario where he became its President for a two year term in 1923-25. It was during this time that the College of Dentistry became a Faculty of the University of Toronto.

Throughout his career as an educationist in dental science Arnold Mason displayed many fine qualities which supplemented and gave poise, dignity and stature to all his undertakings. Dean Rochon of Detroit emphasized his sincerity and loyalty to both friends and convictions; he said "He was always a gentleman, and at home in any company." Mr. Charles McKenna, a life long friend, spoke of his charity, thoughtfulness and courtesy and that this courtesy and friendliness had

brought great happiness to himself and many others as well. His interest in Art is well known and demonstrated by his own fine personal collection and his opinions as a connoisseur of Art are highly respected by those who have made a study of this cultural subject.

Then too there is yet another tribute that can be paid to Dr. Arnold Mason and in this sense he is an example to all his professional colleagues. He has pursued his career diligently and made a success of his vocational and business life. At the same time he has not neglected his cultural and religious needs. As a member of St. Paul's Anglican Church he has always found time for worship and the seeking of knowledge and understanding of the great ethical fundamentals. Neither did Arnold Mason forget his obligations in his own home. It was always a delight to visit his home where he was a wonderful host and it gave him the greatest pleasure to present his family to his friends. And finally he never neglected to devote some time regularly to recreation. His golfing friends enjoy both his game and his "ribbing" and he can always be counted on to give a good performance.

It remained for Dr. Cody to present to Dr. Mason a gift to commemorate the occasion—a continental trunk with a companion piece for Mrs. Mason. Then President Sidney Smith presented to him a book which contained the signatures of all present as a token of admiration and affection for the calibre and competence of achievement in his years of service. Finally Chairman Reid presented a sheaf of telegrams and letters from friends and colleagues all over Canada and United States containing eulogy, congratulations and good wishes.

In his reply of appreciation Dr. Mason was typically gracious. He credited his friends and family for any success he might have had—"My riches are my friends," he said "And the only way to have friends is to be one." He stressed the value of cultivating friendships particularly with younger people and so keep yourself young in spirit. Further he admonished you should not forget your heritage, much can be learned from those who have gone before and above all give a place to cultural study and development in your life. He emphasized the two great aspects of our nature—Material and spiritual. "The spiritual side of our being must not be neglected," he said, "because in reality it is the only side that counts."

DR. ARNOLD D. A. MASON, F.A.C.D.

Thus on the eve of departure for a holiday in Australia did a highly respected and beloved friend and colleague take his leave from active participation in dental affairs. May he long enjoy good health and may his leisure continue to bring him much pleasure and happiness.

T. R. Marshall

Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset, Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.

Problem from Saskatchewan

Why do we fail to obtain anaesthesia in some cases, following the use of 2% procaine? To blame these failures, which occur very frequently in cases where we have extreme hypersensitiveness such as an acute abscess, hyperaemic pulp, etc., upon a coincidental "anomaly or nerve distribution" taxes one's credulity.

Let me cite a case. The lower bicuspids and the first and second molars on the left side have to be extracted. The second molar has an exposed pulp with a polyp extruding into the cavity. The mandibular and long buccal injections appear to be successful. The bicuspids and first molar are extracted without pain but the second molar is extremely painful to the application of the forceps. It has been my routine practice in these cases to apply cocaine crystals, amputate the polyp, apply pressure anaesthesia to the remainder of the pulp so making extraction painless. In my hands intraosseous anaesthesia, mental injection, increased dosage, stronger solutions have not proven as certain as cocaine and pressure.

Now I would like to know wherein do I fail in my ordinary anaesthesia technique requiring a supplementary application of cocaine? Could it be that the pain impulse from the pulp of the second molar was of such high voltage as to force its way through the decreased conductivity of the mandibular nerve block?

The editor of Modern Dentistry in the April 1948 issue states that it has been definitely established that a 2% procaine of a 1½% monocaine are fully adequate and that if the technique is properly carried out and the solution deposited at or near the nerve to be anaesthetized anaesthesia will follow, that there may be some anomaly in the nerve distribution but that is a minor factor in the success of obtaining anaesthesia. — *M. J. MacDonnell, D.D.S., Saskatoon, Saskatchewan.*

Reply from Mayo Clinic, Rochester, Minnesota:

I have your note with regard to problems in dentistry, the particular problem having to do with failure to obtain anaesthesia in some cases following the use of 2 per cent procaine.

For routine dental surgery a 2 per cent solution of procaine hydrochloride is used. This concentration of procaine will, in most instances, produce anaesthesia that is sufficiently profound for extraction of teeth and for other operative procedures in and about the mouth. In some instances, however, adequate anaesthesia is not obtained, regardless of the amount of solution injected, and many dental surgeons have experienced failure to obtain profound anaesthesia, even after repeated injections.

Failure in these instances is most likely to occur when the region to be operated on is hypersensitive. Such hypersensitiveness to the procedures necessary to extraction of teeth is most often encountered in the presence of early symptoms of periapical infection; at such a time teeth are markedly painful to percussion. However, failures are more often encountered in preparation of cavities, particularly if the cavities are in the gingival region of mandibular teeth.

Adequate anaesthesia can be obtained and these failures overcome by increasing the concentration of procaine. Ob-

taining profound anaesthesia is more dependent on the concentration of the solution of procaine than on the quantity used; this is particularly true if block of the larger nerves, such as the inferior alveolar nerve is desired, since the solution must penetrate to the inner nerve fibers in order to produce complete anaesthesia. Considering the small quantity of procaine solution used in dental operations, there is no contraindication to the use of a 4 per cent solution when such use is indicated; this concentration will permit the performance of most dental operations without pain to the patient, and this includes preparation of cavities of hypersensitive teeth.—*Louie T. Austin, D.D.S., Section on Dental Surgery, Mayo Clinic.*

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Reply from Alberta:

Dr. MacDonnell has propounded a question which must be frequently in the minds of all users of block anaesthesia. In the last few weeks I have looked in vain through five standard text books and through various dental articles for an explanation of the problem, which I could accept as proven.

It is a recurring fact in my experience that in a considerable number of cases where symptoms of anaesthesia of the lip and corner of the mouth and tongue have developed rapidly, there has still remained sensation in some part of the field of operation. This has very seldom occurred in the gum and peridental tissue or the bone, but is much more frequently related to the pulp itself. In the removal of lower third molar impacted teeth by sectioning, where there is no sense of pain outside of the tooth, I have frequently drilled through dentine without pain, and obtained pain sensation of slight or occasionally greater degree by manipulating the pulp tissue itself. I have also noted in cases of exposure of the inferior dental nerve in the molar area that manipulation of the nerve itself has produced sensation when there has been complete anaesthesia of the rest of the field of operation.

From the above it seems to me that the leakage of sensation from the area under discussion must be almost always through the canal of the inferior dental nerve or from below it. This brings up two possibilities.

1 Lack of the ability of the anaesthetic solution to penetrate to the centre of the rather thick bundle of nerve fibres at the foramen. A repeated injection and a higher percentage of procaine have not in some cases produced a better result.

2 (a) Accessory nerve supply into the dental pulp by innervation into the bone from below the inferior dental canal. On some few occasions I have had complete anaesthesia above the canal but found definite sensation below it.

(b) There is a recent article by an English investigator reprinted in an American magazine, in which he points out his finding small foramina about a centimeter distal to the inferior dental foramen in a considerable number of mandibles he has examined. His inference is that these canals may carry accessory nerve supply to the inferior dental canal. If so there would be no stoppage of sensation passing through these fibres. Unfortunately I cannot now find the article to give reference.

It appears to the writer that in some cases lack of complete anaesthesia is not due to a failure in applying present day technique. — *John W. Clay, D.D.S., Calgary.*

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Reply from Ontario:

Dr. MacDonnell has raised a question which is one of the major problems of dentistry, and one that has given much mental anguish to the dentist and physical suffering to his patient.

He asks in what particular he fails in his anaesthetic technique. In my opinion he does not fail in his technique any more than dentistry in general fails in this respect. It is a fact well recognized by all those who extract a great number of teeth that profound anaesthesia is difficult or impossible to obtain without sup-

plementary aid when a certain inflammatory phase is present. False pride has too often masked the true status of this problem, and if all teachers and clinicians had been rigidly honest the problem would not be in its present state of confusion.

Most of us are familiar with the patient who presents himself with intractable pain arising, let us say, from an abscessed lower second molar. We have noticed how the patient relaxes and is free of his intolerable pain even before we have finished making our mandibular injection. After a reasonable waiting period we have seen all the signs of profound anaesthesia develop, and the patient is free from pain until such time as we put pressure on the offending tooth, when a severe paroxysm of pain is elicited. Again supposing that we decide to extract the three molars and that conventional anaesthesia has been established we will find that we can extract the third molar with complete anaesthesia and without discomfort to the patient. Then if for experiment's sake we pass over the second molar and extract the first molar we will find that this tooth may also be extracted with complete anaesthesia, but that when we return to the second molar we will hurt the patient very severely if we extracted this tooth without taking supplementary measures.

This phenomena of profound anaesthesia following nerve block on both sides of an area of inflammation, but with severe residual pain within the inflamed area has never been satisfactorily explained, although many attempts have been made to do so. The specialist usually by-passes the problem by resorting to general anaesthesia to his own and the patient's peace of mind, and in general the situation has never been squarely faced. When novocaine was first introduced it was patented and put upon the market as a proprietary product, with all due mysticism and mystery. "Use our product and you will always get profound anaesthesia" was the common song of the salesman, but when you informed them that it was their product with which you had failed to secure anaesthesia the stock answer was, "There must be something wrong with your technique, you should go somewhere and take a course." In short, dogmatic statement has been substituted for rational research.

Many reasons have been advanced for the phenomena, usually with little to substantiate them. Anomaly of nerve distribution, as stated, must surely tax one's credulity. An accessory nerve supply from the Nervus Cutaneous Colli entering the lingual surface of the mandible in the bicuspid area was at one time mooted, but of all the dry specimens that I have seen there was but one that had a foramen on the lingual, and that specimen was in the possession of the propounder of the theory. Even if such a branch does exist with some frequency, why is it only a factor in anaesthesia when inflammation is present?

The Nervus Cutaneous Colli is easily blocked where it hooks around the anterior border of the sternomastoid muscle, and we have blocked it repeatedly in cases with acute abscess of the posterior mandibular teeth. We have found this injection to be valueless, and do not consider this nerve as a factor. It is a superficial cutaneous nerve, and it is difficult to surmise why it was brought into the picture. More recently a branch from the mylohyoid has been suggested instead, but demonstrable proof again seems to be lacking.

Others have suggested that bacterial toxins have reacted on the individual fibres in the area of inflammation, rendering them immune to the action of the anaesthetic. This explanation would seem to be doubtful value, for how can we explain the cessation of all pain following injection except that caused by pressure on the tooth?

Some years ago Professor Fay of Temple University suggested that the sympathetic nervous system might be the pathway by which the pain was transmitted, and recent findings lend support to this idea. Harris of London has reported cases of Tic in which the Gasserian Ganglion had been injected with alcohol without cessation of pain, but when the stellate ganglion of these same patients was injected with novocaine the pain disappeared. In several of these cases pro-

longed comfort was obtained by injecting the stellate ganglion with alcohol.

The sympathetic system is now recognized as containing pain fibres and it is my personal opinion that these fibres form the pathway for the transmission of pain impulses in inflammatory cases. For some time we have been hoping to get a patient in which an acute lower molar showed residual pain following nerve block, and to have the stellate ganglion of this patient injected with procaine. This would be done not with a view to introducing it as a clinical measure but to furnish proof for the explanation of the pain. The stellate ganglion is in an obscure location, back of the neck of the first rib and in close relationship to the vertebral artery. A simplified injection has been introduced recently in which the ganglion is anaesthetized by injecting opposite the sixth transverse process, but even this injection scarcely seems to be within the field of rational clinical procedure, even though it should prove to be effective.

Support is lent to the sympathetic theory by the fact that a judicious injection into the floor of the mouth close to the alveolar process to the lingual of the first molar will often improve the anaesthesia of lower molar teeth. This has been explained as effective by virtue of the fact that it anaesthetized an anomalous nerve branch from the mylohyoid which entered near that point. I think it is very much more probable that what happens is that this injection anaesthetizes the submaxillary ganglion on the lingual side of the mandible in the region of the first molar, thus blocking the sympathetic outflow.

Most dental dissections have been macroscopic in character, and little has been done to trace the fibres through the countless ramifications that are not readily visible to the human eye. Some years ago Sir William Wood Jones, a reputable English anatomist wrote in the Journal of Anatomy that the maxillary nerve had been more accurately described in the books of two hundred and fifty years ago than it is in our modern texts, which is rather a disturbing thought. There is also a tremendous amount of anastomosis between the fifth and seventh nerves, a factor that should also be investigated. In short, scientific verities should be substituted for unsupported theories if this problem is to be solved.—*J. H. Johnson, D.D.S., Professor of Dental Surgery and Anaesthesia, Faculty of Dentistry, University of Toronto.*

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Reply from Ontario:

Let us make an orderly approach to an answer to this problem.

Embryological investigation has never been able to demonstrate more than one sensory nerve supply growing into the first branchial arch from which the mandible and maxilla arise. Concerning the mandible—(1) a bar of mesenchymal tissue, the core of the mandibular process in the developing foetus, transforms into a cartilaginous bar and is called Meckel's Cartilage. The mandibular branch of the fifth cranial nerve or nervous trigeminus grows alongside this cartilage and both Meckel's cartilage and the mandibular nerve are surrounded by membranous bone as far back as the ascending ramus; dorsal to this point bone forms on the lateral side of the nerve only. In the substance of the mandible Meckel's cartilage disappears as it serves no useful purpose; the inferior dental branch of the mandibular nerve enters the bone lingually through the mandibular foramen and passes ventrally through a canal in the mandible supplying sensation to the teeth and osseous structures. At the mental foramen it divides into the large mental branch which exists buccally to supply the soft tissues investing the anterior portion of the mandible labially and the smaller incisive branches which pass to the anterior portion of the bone and incisor teeth.

Reports of branches of the anterior cutaneous nerves of the neck and other contiguous sensory nerves sending branches into the bone of the mandible to receive sensory impulses from the teeth and surrounding structures must be looked upon as exceedingly rare anomalies in view of the known developmental anatomy and

can generally be disregarded as the cause of hypersensitivity.

To quote from Best and Taylor on the physiology of nerve impulse—[2] "The nerve impulse is a self propagated disturbance. That is to say, the energy for the transmission of the impulse is derived from the nerve fibre over which it passes. Nervous conduction therefore depends upon the state of the nerve fibre at successive points reached by the impulse. The impulse resembles a spark travelling actively along a train of gunpowder rather than a wave transmitted passively through air or water. In either of the latter two instances in contrast to the first, the energy is derived from a source other than the medium through which the wave travels, and the force and amplitude of the wave become gradually reduced with distance—if a section of the powder fuse is dampened in advance of the spark, the latter becomes less intense as it passes through the dampened section and travels more slowly. Upon reaching a succeeding dry portion the spark flares up again to its previous intensity and velocity and so long as the powder remains dry is transmitted without change to the end of the fuse."

In spite of the apparent contradiction of the [3] "All or None" principle it is a well known fact that a very strong stimulus applied to a nerve causes an action current of greater amplitude than a weak stimulus, the explanation being that only a small proportion of the units of a nerve are excited by the weak stimulus and all are excited by a strong one.

Anyone who has carried out the simple laboratory experiment of the effect of local anaesthesia on nerve, using a nerve muscle preparation from a frog (sciatic nerve and gastrocnemius muscle) will remember that there are several variants to be considered.

Strength of the local anaesthetic solution.

Time of exposure of the nerve to the solution.

Strength of the stimulus applied to the nerve.

Variation in the size of the nerve.

In the human body we may add to these.

The variation in the speed with which the anaesthetic solution is moved by the tissue fluids.

Variation in the density of the fibrous tissue surrounding the nerve.

The actual condition of the nerve fibres transmitted the impulse.

In applying the foregoing to the problem we are studying we must conclude that the nerve conduction we are dealing with is through the trigeminal nerve. A stimulus to the nerve from inflamed tissue surrounding tooth roots or from a hyperemic pulp is an exceedingly strong one, much stronger and affecting more fibres than from non-inflamed tissues, which may only affect a few nerve fibres. This powerful impulse may be dampened considerably at the point of a partial block but note from above that as soon as normal nerve tissue is reached beyond the block the impulse will regain its former strength and be so registered centrally. This incomplete block may be sufficient to remove a non-inflamed root painlessly as all the fibres of the nerve have not been stimulated.

In order to completely block all the fibres of a nerve trunk it is sometimes necessary to use a stronger solution of a local anaesthetic and keep it in contact with the nerve trunk for a longer period than is ordinarily done.

Variation in the circulatory efficiency in different individuals accounts for a difference in the rapidity of absorption, dilution and removal of the anaesthetic agent.

No one can arbitrarily say that a certain anaesthetic of a fixed strength will give perfect results in all cases and any practitioner who has had normal experience has seen cases which do not yield to local anaesthesia, and must be handled with general.

In conclusion, local anaesthesia must be handled intelligently using the knowledge and training we have been given and the experience we have earned; there are some places where it is contra indi-

cated. Its good name and ours depend on the intelligence and skill with which we use it.

REFERENCES

1. Arey, 1941. "Developmental Anatomy", Ch. 12. Pgs. 381-2.
2. Best and Taylor, 1943. "Physiological Basis of Medical Practice", Ch. 43 Pgs. 1319-21.
3. Starling, 1941. "Human Physiology", Ch. 12 Pgs. 192-3.

J. Fred M. Kennedy, D.D.S., M.D., London.

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Reply from Nova Scotia:

I do feel you have opened up a very complex and controversial subject, and therefore I will hesitate to be too dogmatic in making statements concerning it. However, let us examine your problem which is as follows:

Why do we fail to obtain anaesthesia in some cases following the use of 2% procaine?

First, let us consider the factors that may influence the efficacy of local anaesthesia and I will place them in the order which would appear to me as the order of importance.

(a) Technique of injection.
(b) Solution used.
(c) Whether or not local pathosis exists in the area to be anaesthetized.
(d) Presence of anomalies.
(e) Anatomy of nerve and age of patient.
(f) Mental attitude of patient.

May I direct attention to each of the above phases of the subject in the order of placement.

First—(a) Technique of injection.

In discussing this phase I would like to make this statement: Improper technique of injection is the most important reason for the failure to obtain anaesthesia. We have spoken of anaesthesia, now what do we mean by the term, "Local Anaesthesia"? What are we attempting to produce? This term suggests the production of a local state of insensibility to pain by the hypodermic injection, local application or instillation of appropriate chemical compounds. These chemical substances acting on the lipoids or fatty tissues of the nerve fibres produce a reversible coagulation which prevents, while this state exists, painful sensory impulses from being transmitted to the brain. This is what we are attempting to produce, and depending on the results you desire, a technique is followed to facilitate that end which is complete insensibility to pain.

Now clearly, the means by which we hope to obtain anaesthesia in this case is by the inferior alveolar nerve block injection including the lingual and long buccal injections, either by the intra-oral or extra-oral approach. To produce anaesthesia by this method the solution is deposited by hypodermic syringe para-neurally in *close proximity* to the nerve or nerves innervating the tissues to be subject to surgery. This is most important that the solution be deposited in *close proximity* to the nerve. How often the solution is deposited at variable distances from the nerves with the result that varying degrees of partial anaesthesia are produced and manifested by the usual signs. This degree of anaesthesia may be sufficient for performing surgery of a minor nature as removal of teeth not involved in pathosis but if pathosis exists particularly of an acute nature in or around a tooth or teeth to be removed, then, to produce insensibility to pain you require a complete and total block of all the nerve fibres supplying this area. If one adopts a standard technique for performing the injection it will give excellent results in the majority of cases, but there are variations in the anatomy of individual mandibles which may alter the desired result. These variables include the angle of the ramus to the body of the mandible, the width of the ramus, and the location of the inferior alveolar foramen whether high or low depending on the age of the patient. By ignoring the variations in the anatomy of the structures, ineffectual results of the technique producing partial anaesthesia will result, and may account for many of the failures.

Second—(b) Solution used.

The type of solution used is important for it must be scientifically produced as to the correct concentration, isotonicity, and quantity depending on the size of the nerve to be anaesthestized and must be a fresh solution.

Third—(c) Whether or not local pathosis exists in the area subjected to sur-

gery or along the line of distribution of the nerve to be anaesthetized.

This is extremely important for where you have an inflammatory process existing in a pulp of a tooth, or in the tissues around the tooth, this process whether due to abscess, cellulitis, or neuritis, will affect the efficacy and potency of the anaesthesia adversely and may make more difficult the attainment of a complete and profound block of all sensory impulses due to the acute nature of the inflammatory process.

Fourth—(d) Presence of anomalies.

In your problem for consideration, cited above, the nerves involved are the inferior alveolar, the lingual and long buccal. There may exist an anomaly in some cases where an anastomosis with a branch of the nervus cutaneus colli of the neck region may provide extra sensory impulses to a certain tooth or teeth in the mandible the validity of which may be subject to further investigation but I do feel convinced that if a complete and total block is produced of the inferior alveolar, lingual and long buccal nerves, profound anaesthesia will result in the area supplied by these nerves thereby facilitating oral surgery procedures in the mandible without pain.

Fifth—(e) Anatomy of nerve and age of patient.

The size of the nerve may influence the efficacy of the anaesthesia. The larger the nerve the greater the concentration of the solution necessary to produce anaesthesia. Then also can it be that the more central the fibres of the inferior alveolar nerve innervating the individual teeth the more profound the anaesthesia must be to block these fibres. In addition to the above, the younger the patient the more readily the anaesthetic solution will be absorbed into the nerve tissue and consequently the more readily is anaesthesia produced.

Sixth—(f) Mental attitude of patient.

This is not of great importance in the actual production of anaesthesia but cooperation on the part of the patient does facilitate the perfection of the technique of injection and also aids the operator in verifying the manifestations of anaesthesia. Having deposited the solution in close proximity to the nerve, the mental attitude has no further influence on the chemico physiological reaction which follows in that nerve.

Now returning to your problem, why do we fail to obtain anaesthesia in some cases following the use of 2% procaine?

The influence of the factors outlined above I believe provides the answer.—*Owen L. Croft, Halifax.*

ANNOUNCEMENTS

Annual Convention The Canadian Dental Association

IN CO-OPERATION WITH

The Western Canada Dental Society

Saskatoon, Sask., June 5-8, 1949

The Western Canada Dental Nurses' and Assistants' Association will be holding their Convention in conjunction with the above meeting. Look for further notices.

Cincinnati Dental Society

On March 20 to 22 this Society will hold a Clinic Meeting and Children's Dental Health Day at the Netherland Plaza Hotel.

Academy of Cleft Palate Prosthesis

This Academy will hold its seventh annual meeting on March 21-22, 1949 at the College of Dentistry, Ohio State University, Columbia, Ohio.

The Forum

GINGIVITIS FROM THE STANDPOINT OF THE PHYSICIAN

by FREDERICK F. TISDALL, M.D., F.R.C.P., (Lond.), F.R.C.P., (C.)

Summary of paper in Journal of Dentistry for Children, Third Quarter 1948.

Mild but obvious gingivitis is frequently encountered in individuals who appear to be in good health. The frequency with which this condition is seen even in children and young adults makes it of concern to both the dental and medical professions.

Both local and systemic factors are involved in the production of gingivitis. Evidence has been presented that one of the systemic factors may be a low intake of ascorbic acid.

There is evidence that considerable proportion of the population of the northern part of the United States and Canada receives an inadequate intake of ascorbic acid during the winter and spring months.

An adequate intake of Vitamin C can be ensured by the daily intake of 3½ ounces of citrus fruit juice or double that amount of tomato juice and some raw vegetables, such as cabbage salad. These foods along with any reasonable diet will result in a daily intake approaching the recommended 75 milligrams.

No inference should be made that an intake of food low in ascorbic acid is the systemic aetiological factor in the development of gingivitis. From the nutritional standpoint, the food consumed should supply adequate amounts of all the 40 nutrients essential for life.

SHOULD DENTINE BE DESENSITIZED?

by E. B. MANLEY, M.Sc., F.D.S.R.C.S., Eng., M.D.S., Birm., and J. L. HARDWICK, B.D.S., Birm.

Summary of paper in British Dental Journal, Aug. 6, 1948.

Desensitization of dentine has either directly or indirectly dangerous possibilities on account of the biological relationship that exists between this tissue and the dental pulp.

The pain of cavity preparation should be regarded not simply as an evil to be abolished by the most expedient and efficient methods at our disposal. It is the body's insistent warning that damage is being done. It demands first a reduction to a minimum of traumatic stimuli by improved techniques, e.g. the use of sharp burs in a reducing handpiece. This may require a greater expenditure of time and care, but in the light of both clinical and histological evidence, overrapid preparation of any cavity is to be avoided.

The abolition or reduction of pain by the use of anaesthesia or by the cold water technique by a careful operator who can visualize the effects of his procedures is of undoubted value.

With the exception of sensitive dentine at the necks of teeth, the local application of protoplasmic poisons for the elimination of pain is contraindicated.

The existence in the community of hundreds of men and women who are prepared to devote their time to helping their less fortunate neighbours is, itself, a priceless social asset which the nation cannot afford to damage or to lose. The worst aspect of large-scale social security and welfare programs conducted by centralized government agencies is that they breed a universal sense of dependence. Individual concern for the affairs of others disappears when the prevailing philosophy preaches that relief of all human afflictions is the responsibility of the Government.—From Editorial in Toronto Globe and Mail.

At a time when the means of living are increased, the aims of living are in danger of deteriorating.—Rev. Dr. H. J. Cody.

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"Please may I have it—or does it belong to the Government?"

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Editorial

NINETEEN FORTY NINE

With this issue we commence Volume 15 of the Journal of the Canadian Dental Association. During the past fifteen years we have seen great progress in our national organization. At the commencement of this period the dues to our Association were fifty cents per member and the governors voted fifty per cent of their total income to the Journal Committee in order to inaugurate a national journal owned and controlled by the C.D.A., and to be representative of the highest and best in our profession. By unanimous agreement the journal was pronounced to be the most important project under the surveillance of the Association and all the support possible was pledged to the Committee who undertook this commitment with fear and trembling.

From fifty cents the dues have now risen in most provinces to ten dollars per capita and the end is not in sight. Alberta with a vision so far unequalled anywhere in Canada has voted to raise the dues to twenty-five dollars as soon as the majority of the other provinces will agree to do likewise. This is none too much considering the extremely important issues with which our Association is faced at the present time, issues which will undoubtedly increase in intensity before long and probably with great rapidity and which can only be handled with any kind of efficiency by means of a strong well-financed, well-organized national body.

Obviously the members of the C.D.A. are banded together for a common purpose, namely, to obtain benefits for themselves in order to be able to serve humanity in a way which would be impossible as individuals. To this

end financial help must be forthcoming. There are about 4,500 dentists in Canada. An average gross income of 10,000 dollars would amount to 45,000,000 dollars. What per cent of this amount should be set aside to develop public relations, take care of necessary legislation and develop the home base, namely the organization of the C.D.A.? It is difficult for a dentist to interpret his responsibility to the community as business executives would do. In business enterprises if this were not done a crisis would arise and there would be no funds to meet that emergency. A crisis may arise in our profession, in fact is likely to, and no funds will be at once available to meet that need. Business spends money to educate its customers, so should we. An informed public is dentistry's best friend. Our great resources should be administered by adequate personnel and if this were done it would pay very large dividends.

Some business executives have said that in a $10,000,000 business a cent should be set aside for each dollar handled and used for public relations, free education, etc. One cent on each dollar of 45,000,000 dollars would be 450,000 dollars or a hundred dollars apiece for every dentist in Canada or between eight and nine dollars a month. That is the kind of vision I have for the Canadian Dental Association when one considers the tremendous possibilities for good which lie dormant at our very door step and will remain so until we awaken to the need and the great advantage to all concerned if the need were dealt with effectively.

As for the Journal, 1949 stands forth as a challenge for a larger, a greater, a more helpful publication than ever before. The Journal still remains the most important project of the Canadian Dental Association, not only in keeping the dentists of Canada informed as to the course of events affecting our profession but it also represents Canadian dentistry abroad, in fact it is part of the warp and woof of our national Association.

As stated in our first issue in 1935 the editorial policy of the Journal will be, as far as possible under the direct control of the Association. It will be the constant aim of the officers and staff to make the Journal stand highest in honour, rank greatest in dignity, shine brightest in excellence, depict the widest range of triumph in the scientific achievements of our profession and interpret in the fullest possible manner the handwriting on the wall as that handwriting refers to dentistry:

"Life is an arrow—therefore you must know
What mark to aim at, how to use the bow—
Then draw it to the head and let it go."

M. H. G.

MANITOBA SETS THE PACE

Since writing the above editorial on "Nineteen Forty Nine" Manitoba dentists held their annual meeting and gave a grand account of themselves. These men, realizing fully that not only the future of their profession but their own future depends upon a strong, well financed Canadian Dental Association, led by full time efficient personnel, voted, with no dissenting

voice, to increase their annual dues to the C.D.A. to twenty five dollars, commencing January 1949. This action was taken regardless of what dentists in other provinces might do or not do with regard to this problem which is considered most urgent in the face of world conditions at the present time. M. H. G.

BOOK REVIEWS

Hendersons' Materia Medica, by J. W. K. Ferguson, M.B.E., M.A., M.D., F.R.S.C., and G. H. W. Lucas, M.A., Ph.D., F.C.I.C., Department of Pharmacology, University of Toronto. 289 Pages. Published by the University of Toronto Press, Toronto, Ontario. Price $4.75.

The early editions of Professor Henderson's book were based entirely on the British Pharmacopoeia.

In this volume the authors have included the preparations of the United States Pharmacopoeia and is designed to facilitate rapid comparisons between British and American terminology and standards and do so in a concise manner. The book has also been rewritten owing to the fact that the Faculty of Medicine of the University of Toronto in 1947 decided that henceforth medical students should be taught to write prescriptions in English instead of in Latin.

This book deals with Definitions, Weights and Measures: Materials and Methods of Pharmacy: Incompatibility: The Administration of Drugs: Posology: Prescription Writing: Dispensing: and Description and Discussion of Drugs.

This publication should prove most valuable to every dentist. M. H. G.

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Complete Dental Review, by Walter Neal Gallagher, D.D.S., Lieut.-Commander, Dental Corps, U.S. Navy; graduate of Temple university, Pa., class of 1935; interne at Forsyth Dental Infirmary for Children, Boston, Mass. and Temple University Hospital, 1935. Extern Hahanemann Hospital, Philadelphia, Pa., on continuous active service since 1942 with the United States Naval Dental Corps. 431 Pages. Published by the Dental Items of Interest Co., Brooklyn, N.Y. Price $9.00.

The purpose of this book is not to try to teach the dental student or graduate dentist how to practise dentistry by short cut methods but to serve as a valuable aid to the dental graduate by assisting him to keep in constant review those subjects comprising modern dentistry. Fundamentals are easily forgotten and this book provides a concise refresher course in all branches of dentistry.

This book consists of sixteen dental subjects arranged in chapter form and takes the reader over the highlights by a series of questions and answers in condensed form. The following are the subjects covered: "General Information in Practice;" "Anatomy;" "Anaesthesia;" "Bacteriology;" "Chemistry;" "Embryology;" "Exodontia and Oral Surgery;" "Histology;" "Materia Medica, Pharmacology and Therapeutics;" "Metallurgy;" "Physiology;" "Prosthetic Dentistry;" and "Radiology."

This publication contains an immense amount of information in very condensed form and should prove very valuable as a book of reference. M. H. G.

All higher motives, ideals, conceptions, sentiments in a man are of no account if they do not come forward to strengthen him for the better discharge of the duties which devolve upon him in the ordinary affairs of life.—Henry Ward Beecher.

A man asked to define the essential characteristics of a gentleman—using the term in its widest sense—would presumably reply, "The will to put himself in the place of others; the horror of forcing others into positions from which he would himself recoil; the power to do what seems to him to be right, without considering what others may say or think."—John Galsworthy.

ROYAL CANADIAN DENTAL CORPS NEWS

Major I. A. L. Millar, of the Dental Department, H.M.C.S. "Naden", Esquimalt, B.C., has been accepted as a candidate for the General Post-graduate Course at the U.S. Naval Dental School, National Naval Medical Center, Bethesda, Md. The U.S. Naval Dental School functions primarily as a school for post-graduate instruction to Naval Dental Officers.

The General Post-graduate Course is of six months' duration, commencing Jan. 5, 1949, and is designed to acquaint experienced dental officers with recent advances and newly developed specialized procedures. It includes oral diagnosis and roentgenology, operative dentistry, periodontia, oral bacteriology, endodontia, biochemistry, crown and bridge prosthesis, partial and full denture prosthesis, exodontia, dental property and accounting, and dental administration.

Arrangements have been made for Lt.-Col. G. B. Shillington of The R.C.D.C. School to attend a short course in Full Denture Prosthesis in Harrisburg, Pa., under the direction of Doctor H. F. McGrane.

The following officers have recently completed a 4-week clinical course at The R.C.D.C. School, Ottawa — Captain R. E. Brown of Camp Borden, Captain H. W. Hart of Ottawa, Captain R. H. G. Cunningham of Calgary, Captain C. L. Johnston of Toronto, Captain C. M. Cornish of Winnipeg, and Captain A. R. Smith of Halifax.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

British Columbia Increases C.D.A. Grant

The following notification has been received from the Registrar of the College of Dental Surgeons of British Columbia:

"At a meeting of the Council held on the 20th instant, it was agreed to increase the grant of the College to the Canadian Dental Association for the year 1949 to Ten Dollars ($10.00) in respect of all members of the College practising within the Province as at January 2nd next."

New P.E.I. Representative Appointed

Dr. R. H. Barrett, Charlottetown has been appointed representative for Prince Edward Island to the Board of Governors of the Canadian Dental Association. The former representative, Dr. D. T. Waye, has been named as alternate representative.

NEWS FROM THE PROVINCES

ALBERTA

Official Opening of New Dental School

The completion of another phase in the expansion program of the Faculty of Dentistry at the University of Alberta was marked recently by the official opening of the clinical facilities in the new wing of the Medical Building.

The present Faculty has its roots in the school of dentistry which was opened in the fall of 1918 as a department of the Faculty of Medicine. At this time, only the first two years in dentistry were taught in Alberta and it was not until 1925 that the complete course was offered at this University. Under the capable guidance of Dr. H. E. Bulyea as director, the school developed until his retirement in 1940. Those familiar with dental education in Canada, particularly through the trying period of the '30's, are well aware of the high praise due Dr. Bulyea for his fine contribution.

In 1940 Dr. W. Scott Hamilton was appointed to succeed Dr. Bulyea as director of the school. In keeping with the expanding needs and position of the school, the university authorities approved the change from a "school" to a separate Faculty of Dentistry and appointed Dr. Hamilton as dean in September of 1944.

In cognizance of the increasingly important role of the Faculty of Dentistry plans were made to greatly expand the facilities of the institution. The first major phase was completed this fall.

FIG. 1—DENTAL CLINIC

Whole of 1st floor of right wing which is now extended twice the length back.

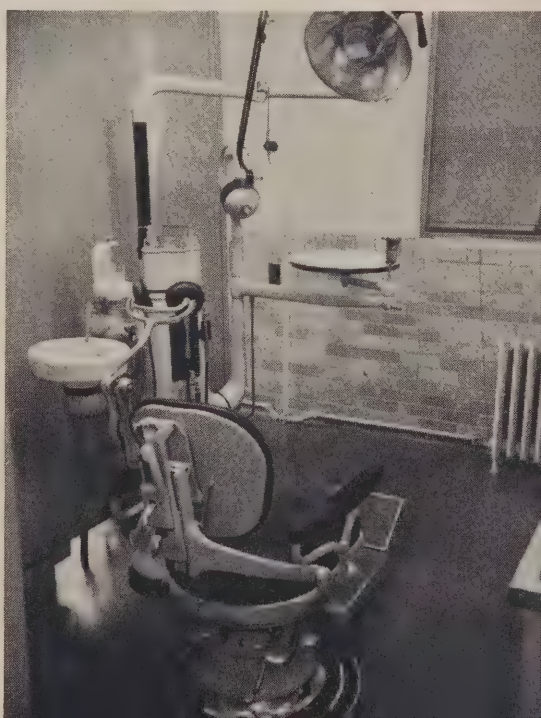
On the afternoon of September 18, the new clinic was opened for public inspection. In the evening the formal opening ceremonies were held before a group of university, government, and civic officials with President Newton as chairman. On behalf of the Board of Governors the new facilities were handed over to the Faculty. In accepting Dean Hamilton expressed appreciation on behalf of the Faculty and stressed the latest trends in dental education. The Reverend Dr. G. B. Caird of St. Stephans College made the dedication and Dr. W. W. Cross, acting premier and provincial Minister of Public Health, declared the clinic officially opened. Congratulations of the Senate were expressed by the Chancellor, Dr. G. F. McNally.

The main clinic has its entrance on the ground level at the east side of the building. This will be directly across from the new Rutherford Memorial Library when it reaches completion in the near future.

The stairs from this door lead to a spacious well-lighted reception room, furnished with comfortable chairs and magazine table. At a long counter on the north side of this room a reception clerk attends to the registration of

FIG. 2

View of typical cubicle in the dental clinic.



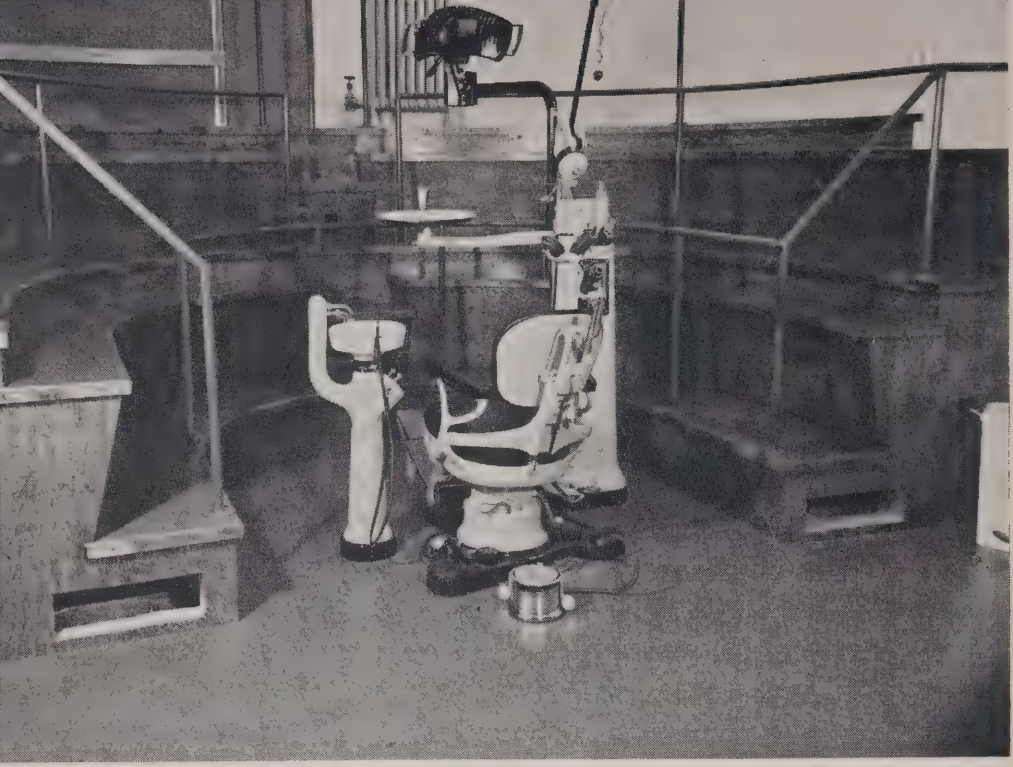
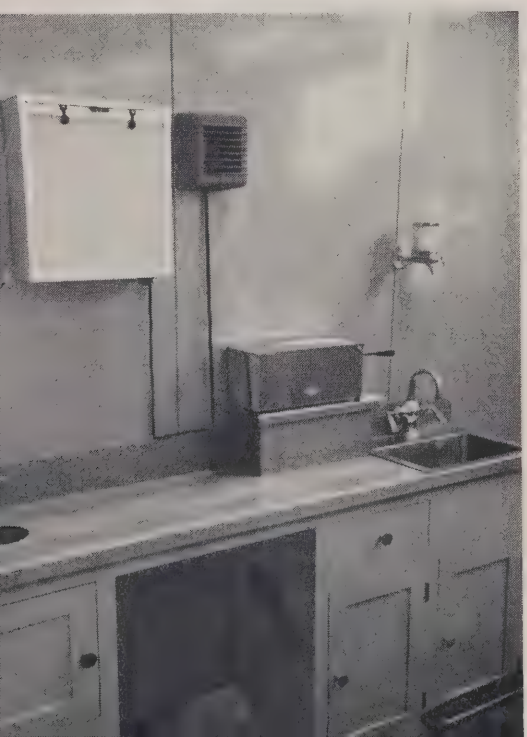


FIG. 3
Demonstration Theatre. New dental clinical facilities.

FIG. 4
View of typical cubicle in the dental clinic.



new patients, appointment records and announcing the patients to the student.

Passing through the south door of this room we come to the clinic office in which the financial records are kept, the necessary bookkeeping, and all financial arrangements and payments made. Proceeding south along the corridor we come next to the diagnostic department consisting of three rooms. There is a small examining room equipped with an x-ray machine and a dental chair. Leading from this is a small darkroom. This provides all the essentials for the individual student to take and process roentgenographs.

The next room is much larger and here we find two complete dental units. Here too, we have a large refrigerator for keeping bacteriological supplies, drugs and ice cones—the latter being used for tooth vitality tests. This diagnostic room is equipped with another x-ray machine, film dispensers and receptacles, instrument cabinets, viewboxes to give a complete set-up for examination, diagnosis and treatment planning. From this room through a maze we enter a darkroom where there are two large processing tanks,

counter space, automatic thermostatic control for the water circulating through the tanks, drying racks and fans. The walls and doors in the diagnostic department are all centre-lined with lead to completely shield the x-rays from the rest of the clinic.

Passing from this room we arrive in the nurses' room. This is equipped with a large recessed autoclave, cabinet and cupboards for surgical supplies and drugs and anaesthetic equipment. Here the dressings are prepared, anaesthetic made, autoclaving done and laundry dispersed.

Just south of this room we find the demonstrating theatre. The seating arrangement in this room is in the form of a half circle and on three levels. The students enter along a side corridor and from the back of the seats are railed off from the main floor and centre of the room. A large dental unit of the latest type is in the centre providing the best of facilities for all demonstrations. The dental chair is on rollers and can be easily removed to be replaced by an operating table if desired. Other equipment here includes a sterilizer and autoclave, cabinets and counters, completely providing a room ideally arranged and fitted for demonstrating techniques or operations to the student. Adjacent to this is a retiring or recovery room and a fully equipped examining room, where medical examinations can be made. Further along the corridor is the bacteriological department where a technician trained in caries control tests, preparation of specimens, sectioning, staining and microscopic work has all the facilities of a completely furnished laboratory. Here all the various bacteriological and pathological tests are made.

At the end of the corridor are the faculty offices and a common room. The preclinical laboratories are situated on the ground floor in the central part of the building. These have not as yet been changed, but have a considerable amount of new equipment. A technical laboratory has been built along the south side of the east wing in the space formerly occupied by the clinic. This provides well lighted and equipped counters for prosthetic and ceramic work. Just off the main clinic is another room especially planned for practical ceramic work.

The main clinic consists of a large glassed-in supply office and forty-eight completely equipped cubicles.

Each cubicle has all the equipment found in a modern dental operating room, including a chair, dental unit, sterilizer, instrument cabinet, counter with gas and compressed air outlets, a stainless steel sink, a towel dispenser, waste receptacle, x-ray view box with a rheostat controlled light and a speaker box. The speakers are all connected with a main control box in the supply office where an operator is in attendance. This permits constant contact with the office and also contact from the office to any student or instructor anywhere in the clinic or adjoining departments. The entire wing is exceptionally well lighted and ventilated. The cubicles are of steel construction and give the student the conception of practising in an individual office.

Canadian dentistry looks forward to further advances in dental education as a result of these much needed and greatly appreciated facilities.

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Acceptance of New Dental Clinic, University of Alberta

by W. Scott Hamilton,
Dean, Faculty of Dentistry.

At official opening September 18, 1948.
Broadcast over C.K.U.A.

Dr. Newton, Honourable Dr. Cross, Mr. Chairman of the Board, Your Worship, and distinguished guests, I have a lot to say and a very short time in which to say it. I should first like to extend a welcome to Dr. Merkeley, President of the Canadian Dental Association, and to Dr. Faskin, President of the Western Canada Dental Society. Dr. Roy Ellis, Dean of the Faculty of Dentistry, University of Toronto, is arriving later this evening, and will be our guest at meetings next week.

In accepting this new dental clinic from you, Sir, it is my desire to express, on behalf of this Faculty and the entire dental profession, a feeling of profound gratitude. If I might speak for the people of this province as well, I would say that their appreciation should be even greater, for it is they who will, through our graduates, derive the ultimate benefit. To the architects, contractors, equipment manufacturers, supply houses, and

the most humble workman we owe a debt of gratitude.

When the second war broke out we were not at all well equipped to meet the demands expected of us. Dental personnel for the armed services were in great demand and in spite of short staff and poor facilities, we fell into line, and embarked upon an accelerated program of education.

As a result of cooperation between the Alberta Dental Association and the Board of Governors of the University, plans were initiated for expansion of the Faculty to meet the ever increasing demand for dental service, and without going into further detail, the clinic which you have seen this evening has resulted from the added support of our provincial government.

In courses such as dentistry there is a tendency to read only prescribed textbooks. Universities are not trade-schools and we must constantly be on the alert to see that our students are truly educated. If we lose culture, we lose that for which our forefathers made great sacrifices to establish and preserve. Indeed, we may even lose freedom. The only type of individual whom we wish to attract to the profession of dentistry are those with the highest degree of integrity and who are imbued with a desire to serve their fellow man.

In return for the privileges enjoyed by those who have the advantage of a university education, there is no better place to deposit support than in the young men and women who are later to take our places in the profession. Without such support a faculty can function only to a limited percentage of its efficiency.

In the past, the dental profession has devoted its time largely to the treatment of the most common and wide-spread disease of man, namely dental caries or decay of the teeth. Indeed, it was the ravages of dental decay which made the dental profession necessary, and even today, most of our time is devoted to the restoration of lost tissue. With knowledge now at our disposal, that is not good enough.

Caries is so common that we either throw up our hands and consider that there is no escape, or, what is even worse, some look upon it as a natural condition. Many people are unfamiliar with the serious consequences beyond the local pain which is sometimes experienced. Robby Burns explains this pain very well:

Where'er that place be priests ca' Hell,
Where a' the tones o' misery yell,
An ranket plagues their numbers till,
In dreadfu' raw,
Thou, toothache, surely bear'st the bell,
Among them a'!

I have not time to explain why toothache has been accclaimed the king of pain, nor to give in detail, the many complications traceable to dental disease, resulting even in death, for I must reserve enough time to tell you of our efforts towards prevention.

While, at the present time, we cannot entirely prevent dental caries, we are most certainly in a position to control it, providing we have cooperation from the public. Public cooperation is absolutely essential. It is a pleasure for me to report that Miss Knoll, a member of our staff has recently returned from the University of Michigan, where she learned the bacteriological technique for the determination of the activity of dental caries. This will be an invaluable aid to preventive dentistry, and it is our hope that before too long, our new clinic may be used for the training of our students and practising dentist, as well, in the control of this disease.

Let me again stress that this is not a cure-all in every instance, but in the treatment of a large number of cases it was found by conservative estimate that the disease could be reduced by 40%. With such startling results as this it is obvious that with public support and funds for research, we should be able to look forward to the day when the disease is eliminated. What a relief to man such an accomplishment would be, and from a purely economic standpoint, it would pay to launch a public health program along these lines.

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DEAN W. SCOTT HAMILTON

Dr. W. Scott Hamilton, Dean of the Faculty of Dentistry, University of Alberta, was honoured recently for his service to dental education, in being made a Fellow of Dental Surgery, Royal College of Surgeons of England. Dr. Hamilton hopes that he may be able to accept this honour in person at the London Convocation of the College next summer.

Dr. Hamilton was born on a farm in western Ontario near the town of Gorrie, where

he received his early education. Following which he took his high school training at Albert College, Belleville.

Dr. Hamilton made his first contribution to the progress of "the West" by joining a survey group which was then projecting a route of the Canadian Pacific railway in Saskatchewan. He spent about three years with this group, until in 1914 he enlisted as a signalman in the Canadian Artillery, and proceeded overseas in the spring of 1916 to join the 13th Battery, Royal Canadian Artillery. Dr. Hamilton saw service in France until the spring of 1918, when he transferred to the air force and commenced fighter training as a Flight Lieutenant. The end of the war interrupted this training and Dr. Hamilton returned to Canada, retiring early in 1919.

In the fall of 1919 Dr. Hamilton enrolled in the new department of dentistry at the University of Alberta, which at that time gave only the first two years in dentistry. He completed his course at the University of Toronto, graduating with the degree of Doctor of Dental Surgery in 1923. Dr. Hamilton then returned to Edmonton and entered into private practice, later joining the Department of Dentistry of the University of Alberta in 1926 as an instructor in operative dentistry and surgery.

While still at University, at the end of his first year, Dr. Hamilton married Lelia Clarke. They have two children, Jack and Betty-Jean.

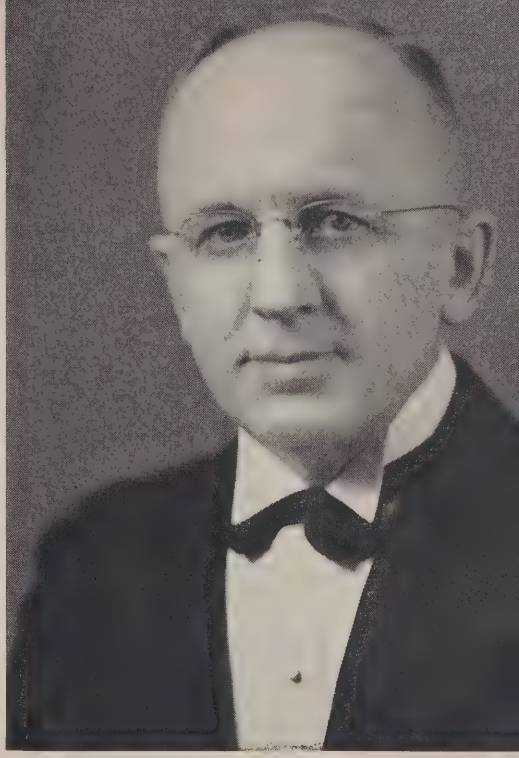
On the retirement of Dr. H. E. Bulyea, Dr. Hamilton was requested to succeed as director of the School of Dentistry at the University of Alberta. At this time he restricted his private practice to oral diagnosis and surgery.

In 1944 when the University decided to create a separate faculty of dentistry Dr. Hamilton became the first dean and under his guidance the faculty has further progressed towards its high goal. He is now full-time dean with consulting privileges.

In 1947, in recognition of his "meritorious service in the field of dental education, science, and art," Dean Hamilton was made a Fellow of the American College of Dentists.

Dean Hamilton has been on the Council of Dental Education of the Canadian Dental Association for the past four years and since 1946 has been chairman of that worthy body.

In addition to his busy duties in practice and in the field of dental education Dean



DEAN W. SCOTT HAMILTON

Hamilton is the representative from the Canadian Dental Association to the Dominion Dental Council; a past president of the Edmonton Dental Society; member of Ivanhoe Lodge A.F. & A.M.; Scottish Rite; and a member of the Edmonton Rotary Club.

Canadian dentistry is extending its congratulations and best wishes to Dean Hamilton who looks forward to further worthy contributions in the field of dental education.

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Refresher Course

In conjunction with the recent opening of the new facilities of the Faculty of Dentistry of the University of Alberta, a two-day refresher course was held which was attended by 160 members of the dental profession of the western Canadian provinces. Clinics were presented by members of the faculty and included the subjects of:

Periodontia	Dr. J. W. Neilson
Surgery	Dr. P. J. Kendal
Fixed Partial Dentures	Dr. J. D. McLean
Prosthodontia	Dr. R. A. McEwen
Dental Anatomy	Dr. J. D. Hawkins
Periodontia	Dr. Wm. Orobko
Endodontia	Dr. G. A. Brass
Oral Diagnosis	Dr. H. R. MacLean
Orthodontia	Dr. W. A. Quigley

The special address on this occasion was given by Dr. Roy G. Ellis, Dean of the Faculty of Dentistry, University of Toronto, who discussed "Fractures of the Anterior Teeth in Children." Dean Ellis gave a further fine paper on Dental Education at the concluding banquet of the course.

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Faculty of Dentistry

Recent changes in the staff of the Faculty of Dentistry, University of Alberta, include the appointments of R. B. Blackmore, D.D.S. (Alberta), Instructor in Operative Dentistry; W. G. Hall, L.D.S. (Eng.), D.D.S. (Alberta), Instructor in Prosthetic Dentistry; C. Duke, D.D.S. (Alberta), Instructor in Prosthetic Dentistry; W. A. Johnstone, D.D.S. (Alberta), Instructor in Prosthetic Dentistry; K. A. McMurchy, D.D.S. (Alberta), Instructor in Operative Dentistry; H. L. Samuels, D.D.S. (Alberta), Instructor in Operative Dentistry.

With the retirement of Dr. A. B. Mason, Associate Professor of Periodontology, the faculty loses one of its most faithful and admired members. Dr. Mason joined the staff of the University in 1925 and his services to the profession and the province have been most worthy. We wish him continued success and good health.

Miss Mary-Louise Knoll was appointed to the faculty as laboratory technician, with special training at the University of Michigan.

Enrolment at the Faculty of Dentistry, for the session 1948-49 is:

First year, 27; second year, 25; third year, 51; fourth year, 20. This is a total of 123.

Dr. S. D. Fraser is taking a post-graduate course at the University of California in Prosthetic Dentistry.

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Promotions, 1948-49

The following promotions in the Faculty of Dentistry, University of Alberta, have been announced:

Dr. G. A. Brass, from Lecturer to Assistant Prof. of Operative Dentistry.

Dr. S. Fraser, from Assistant to Associate Prof. of Prosthetic Dentistry.

Dr. J. D. McLean, from Lecturer to Assistant Prof. of Prosthetic Dentistry.

Dr. Wm. Orobko, from Lecturer to Assistant Prof. of Operative Dentistry.

Dr. Wm. Quigley, from Assistant to Associate Prof. of Orthodontia.

Calgary Dental Society

This Society held its dinner meeting at the Horseshoe Inn on November 18.

A grand turnout was on hand to meet and listen to the President and the Secretary of the Canadian Dental Association, Dr. H. J. Merkeley and Dr. D. W. Gullett respectively, who were introduced by Dr. Baden Powell.

Dr. Merkeley gave a fine talk on the affairs of our National organization, as they exist today and as it is hoped they will be in the near future. He stressed particularly the need for recognition of Dentistry as a Public Health Service.

Dr. Gullett spoke in detail, to the great interest of all, of the State Dental Service in Great Britain, giving the members an accurate insight into the dental situation that now exists in that country, especially in so far as the practitioner is concerned.

Dr. Lorne Brooks thanked these two able gentlemen, on behalf of the Calgary Society, for the sincere work they are doing in the interests of the Association, and for their splendid talks at this meeting.

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Lethbridge Dental Society

At a dinner meeting of this Society held November 17, Dr. Merkeley, President of the Canadian Dental Association, gave a paper on the work of the Association. This was a very comprehensive and commendable presentation. Dr. Gullett, Secretary of the C.D.A., spoke chiefly on dental aspects of the government health plan operating in England. All present were pleased with the valuable information revealed.

The meeting was presided over by the President, Dr. A. R. S. Gray.

Out of town visitors included: Drs. Clay, Baden Powell and Steeves of Calgary; Drs. Lynn Taber and Williger of Pincher Creek and Dr. Bingham of Raymond.

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Edmonton and District Dental Society

At the December 7 meeting of this Society held in the Macdonald Hotel, there was an excellent turn out of 80 members, denoting a keen interest in the subject of prosthetic dentistry.

A study group under the chairmanship of Dr. Harold Knight presented a most comprehensive clinic on "The Basic Principles of the McGrane Full Denture Procedure." The dif-

ferent steps of this technique were carried out on a patient, Dr. Bill Janzen, also a member of the group.

The first step, the taking of the primary impressions, was demonstrated by Dr. Stan Hodgson. A low fusing compound was used to produce as little compression as possible. Dr. Hodgson stressed that the word "snap," in relation to impressions should be removed from our vocabulary. Primary impressions should be done with T. C. A.—Time, Care, and Accuracy.

Dr. Harold Knight took the final impressions. He stressed the necessity of taking a non-pressure impression, and demonstrated this by using plasto gum, although any non-pressure impression material that the operator prefers is acceptable. He also registered primary centric by having the patient bite into soft wax on a hard wax lower bite block. Do not use the term "mush bite."

The registering of positive centric was demonstrated by Dr. Vic Lloyd by means of a pin tracing device. This is an intra-oral registration which definitely locates functional centric and also creates equalized pressure of the finished dentures on the ridges.

Dr. Hudson Scott outlined the laboratory technique in the construction of these dentures. He also demonstrated how to check the aesthetics and phonetics in the try in. -Also it was shown how within a certain range the bite may be opened or closed without disturbing the centric relation.

The last member of the group, the patient, Dr. Bill Janzen, summarized the important points and gave the patient's viewpoint of the completed dentures. He mentioned the fact that the number of return visits averages 1.5 per patient.

On behalf of the society, Dr. Hollis Brown thanked the study group. He stated that the careful and interesting presentation displayed the thorough knowledge of the subject by the group. Also the display of models and the detailed handling of the subject could only be obtained by weeks of hard work. He hoped that this clinic would be the inspiration to other groups of the Society to put on equally instructive and educational meetings.

The business of the Society was carried out efficiently by the president, Dr. George Decker, who presided.

Guests at the meeting included the students of the graduating class of the school of dentistry at Alberta University.

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Edmonton Dental Nurses' and Assistants' Association

A tour of the Dental Clinic at the University of Alberta on November 8 was conducted by Dr. H. R. MacLean. Following the tour Dr. MacLean gave an informative talk on the Development and Growth of the Teeth and Caries Control.

The regular monthly meeting was held on November 16 in the Banquet Room of the Seven Seas. Dr. Wm. Orobko was the speaker of the evening. His subject was "The Assistant's Role in Acquainting the Child with the Dental Office." Included in the business were plans for Christmas Hampers to be packed at a social evening at the home of the President, Miss Jean Rogers. J. E. ROGERS

SASKATCHEWAN

Saskatoon Dental Society

The society had a very large attendance to welcome Dr. Merkeley and Dr. Gullet, the President and Secretary respectively of the Canadian Dental Association. We were also favoured by the presence of outside guests, whom included Dr. Fasken, President of the W.C.D.S., also Dr. L. Connell and Dr. J. Brass, Past Presidents of the Saskatchewan Dental Council.

Dr. Cliff Hallett, President of the local society presided and thanks to our distinguished guests were expressed by Drs. Connell and Brass. Appreciation was extended for the valuable service these men are rendering to the profession on this continent. It is evident that the prestige of the Dental Association is growing, but it is just as evident that we must continue to serve, that each and every member in the profession must be prepared to render service whenever possible.

Dr. Merkley, President of the C.D.A., informed the meeting on the operation of the Association. He referred to the growth of the body and to the financial difficulties at the present time. We may expect requests for increased membership fees to this body, which we should be ready to accept. There is much to be done of immense importance and we must be in a strong position to provide the

necessary leadership. He mentioned that the chiropractors pay $50.00 membership dues per year.

Dr. Merkeley referred to various items receiving attention of the executive body, such as:

Special Training in Dental Public Health.
Exemption of Dentists from the Labour Union Jurisdiction.
Dental Research.
Dental Health Insurance.
Dental Health Services.
Dental Health Officers.
Council of Dental Education.
Industrial Dentistry.

He concluded his extensive discourse on the Future of Dentistry in Canada. He stressed that the future depended largely upon the willingness of the members of the profession to contribute to the improvement of our services.

Dr. Gullett, Secretary of the C.D.A., reported in detail his findings as a result of his study of the Health Act of Great Britain. He had been sent as a representative of our body to England this past summer for this purpose.

In general his observation was that there was in existence a bloodless revolution, also he found that the people were living a very regulated life; their diet was very severe and that they were living more poorly than any other people in Europe.

He referred in detail to the provisions of the Health Act of that country. He stated that the magnitude of the Act was immense; it possessed some good points but also some bad ones. It is a compulsory scheme in that every one pays, but it is optional whether dentists worked under the scheme. The actual costs were unknown but it was very apparent they were many times greater than estimated.

The dental profession had not been treated nearly as favourably as the medical profession. There were a great many regulations for the dentists. The dentists had three main objections:

1. They objected to the regimentation.
2. They objected to the minister being a dictator.
3. They objected to the basis of payment.

His observation of the opinion of the British was that the scheme was there to stay, that it was not very workable under its present form, but they would mould it into a workable form.

He discussed, with the assistance of slides, the payments for dental services and the administration of the services.

In conclusion, he challenged the members of the dental profession to become well organized, and energetic so that the national body would become a thriving organization. He stated that every political body in Canada had a Medical Health plank in its platform; what plan may be instituted is questionable, and that the dental profession is challenged at this time to provide sound leadership in the field of Dental Health.

The members of the Saskatoon Society reviewed for Dr. Fasken, President of W.C.D.S., Dr. Merkeley, President of C.D.A. and Dr. Gullett, Secretary of C.D.A., the plans made so far for the forthcoming Convention in June 1949 of the Canadian Dental Association in co-operation with the Western Canada Dental Society. All were agreed the plans were well organized. L. D. H.

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Regina and District Dental Society

This Society met for its regular meeting, November 15, at the Hotel Saskatchewan.

Dr. Merkeley and Dr. Gullett of the C.D.A. were present and spoke on C.D.A. matters.

Dr. Gullett's review of the Dental Health Measures Program in the United Kingdom, accompanied by illustrations proved a very absorbing and interesting address, with great appreciation from the Society on the detailed and graphic description which demonstrated the speaker's grasp of the situation.

The comprehensive picture of this scheme as delineated was highlighted by the factors of regimentation, voluminous regulations, chains of authority or command, economy of function, and ultimate cost to the public.

The resultant discussion by the Society stressed the importance of professional guidance in establishing possible State Health Measures within our own country.

Dr. C. Campbell Dixon presided.

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Moose Jaw Dental Society

Further information re Dr. Chegwin:

Dr. A. E. Chegwin of Moose Jaw has been appointed Director of Dental Services for the Province of Saskatchewan and took up his new duties on November 1.

He was graduated from the R.C.D.S. in 1919, after having spent two years in the

Canadian Army. Upon graduation he immediately established a practice in Moose Jaw, continuing until the present time, except for a break of four years with the C.A.D.C. He left the service with the rank of Major.

Dr. Chegwin took a keen interest in Civic Affairs, having been an alderman for eight years and serving on the hospital board, of which he was chairman, for three years.

He is a member of the Moose Jaw Military Institute, the Rotary Club and the Masonic Order.

He was also on the council of the Saskatchewan College of Dental Surgeons. The Moose Jaw Dental Society will miss Dr. Chegwin as he was a keen and enthusiastic member, having been its immediate past president.

The officers of the Moose Jaw Dental Society for the 1948-49 season are:

President: ..... Dr. Duff Leask
Vice-President: ..... Dr. F. B. Cooper
Secretary: ..... Dr. L. F. Hare

Regular monthly meetings are being held, and so far films are the feature of our meetings. These are arranged for by Dr. Muirhead.

L. F. HARE

MANITOBA

Manitoba Dental Association

The west again runs true to tradition for progressive ideas. It was the west which began putting on the pressure at the annual meetings of the Canadian Dental Association to have the provincial corporate dental bodies pay annual dues to the C.D.A. out of provincial annual registration dues and not leave the financial support of the C.D.A. to voluntary organizations such as the Ontario Dental Association or the Vancouver Dental Society. It took several years to get this plan into complete operation but the day finally arrived and for several years every registered and licensed dentist in Canada has paid dues to the C.D.A. It was the west which put on the pressure to have the amount paid to the C.D.A. raised to what was considered adequate and beginning with 1949 all the provinces will be paying ten dollars to the financial support of the C.D.A.

Alberta, however, passed a resolution in 1948 to the effect that the dental situation from a national viewpoint was so serious that adequate financial support to the C.D.A. required $25.00 dues and went on record as prepared to begin paying this amount when a majority of the provinces agreed to do likewise.

The Manitoba Dental Association in session on Wednesday, December 15 went on record as willing and ready to begin paying $25.00 annual dues to the C.D.A. in 1949 without any provisoes or strings attached to it. To do this it will be necessary to raise the annual provincial registration dues to at least $40.00. This will come as a distinct shock to some members of our Association who were not at the meeting. But when you think it over you will no doubt realize that it means only $3.33 per month, $2.00 of which goes to our national organization which is necessary to guard as far as possible the interests of the dental profession in Canada. The teamsters, the plumbers, the truck drivers, the carpenters and in fact practically every occupation has its national organization and pays dues running as high and higher than the Manitoba dues.

The members discussed the proposed by-laws for the regulation and control of dental hygienists and gave their approval with one or two minor alternations.

An interesting item of the meeting was that the Association's Secretary, J. F. Morrison was presenting his 25th annual report at this meeting and the Board thought the occasion should be marked by making a presentation to him. Dr. Morrison's hobby being music the gift was a record player. The presentation was made by Dr. Norman Carmichael, President of the Association.

J. F. M.

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Winnipeg Dental Nurses' and Assistants' Association

This Association held its annual Christmas party, December 13 at Moore's. Marion Smith and Irene Russell had a very attractive program of singing and games, and if you think Mrs. Roberta Jopling isn't a real Santa Claus, ask any D.A.

FLORENCE JEFFREY

ONTARIO

Faculty of Dentistry, University of Toronto

Drs. P. G. Anderson and R. J. Godfrey were essayists at the twenty-fourth annual Greater New York Dental meeting on December 6-10.

Dr. H. Halduson gave an extra mural lecture entitled "Interception of Malocclusion" at the Inter County Dental Society of Kitchener on December 1.

Dr. G. T. Mitton, Associate Professor of Dental Public Health, attended the meetings of the United States Public Health Association in Boston November 8-10.

Two of the four dentists enrolled at the Faculty in the D.D.P.H. course are benefitting from the Federal Government Health grant to the Province of Ontario under the plan of providing assistance for advanced training in Public Health.

A distinguished guest from Britain has paid a visit to the Faculty. He is Professor F. C. Wilkinson, M.D., D.D.S., D.D.Sc., M.Sc., Dean and Director of the School of Dental Surgery, University of Manchester.

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Newly elected Directors of the Board Royal College of Dental Surgeons of Ontario

The biennial election for the Board of Directors of the Royal College of Dental Surgeons of Ontario resulted in the election of the following representatives for the ensuing two year term:

District No. 1
Dr. C. M. Purcell.....Pembroke
District No. 2
Dr. S. J. Phillips.....Oshawa
District No. 3
Dr. M. V. J. Keenan.....Sudbury
District No. 4
Dr. Harvey W. Reid ..... Toronto
District No. 5
Dr. M. C. G. Bebee.....Owen Sound
District No. 6
Dr. F. J. Furlong .....Windsor
District No. 7
Dr. R. O. Winn.....Kitchener
District No. 8
Dr. W. J. McEwen.....Hamilton
Faculty of Dentistry
Dr. R. J. Godfrey.....Toronto

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Preventive Dental Health Program in Ottawa

The Ottawa Dental Society has approved a Dental Health Program designed to inform both members of the dental profession and the general public. The plan calls for a children's Dental Health Day scheduled for March 14, 1949. A program of movies, afternoon talks, and public displays on care of the teeth will be presented on that day.

Several days prior to Health Day, contests will be open to all children giving answers to Dental Health questions and prizes and gifts will be awarded to winners.

While educational talks are given to the public the dentists themselves will attend scientific lectures showing new methods of treatment and movies on Dental Health.

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Ottawa Dental Society

At the November meeting of this society Dr. D. M. Tanner of Toronto discussed "Surgical Problems of the General Practitioner and How They are Met."

The executive committee of this society for 1948 and 1949 was announced as follows:

President ..... Dr. George Barrett
Vice-President ..... Dr. John French
Past President ..... Dr. Elwin Macartney
Secretary ..... Dr. Allen Simpson
Directors ..... Drs. A. Couture; F. G. Gollop; C. E. Wood; C. E. Laurin; W. A. Wolfe; T. W. Richards and H. N. Beach.

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Dr. A. R. Poag, President of Ontario Dental Association Bereaved

The sympathy of members of the Ontario Dental Association and a host of friends across Canada is extended to Dr. and Mrs. Poag in the death of their daughter, Thelma Patricia, on December 3. Although Miss Poag had not enjoyed the best of health it was a great shock to the family and their friends that she should be cut off in the flower of young womanhood.

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The Dental Nurses' Alumnae Association of Canada

The Dental Nurses' held their Mother and Daughter Banquet at the Wakunda House on Bloor Street. Mr. John Halcrow was the after dinner speaker, his subject was The Importance of the Individual in his Community or Association. Mr. Halcrow is a speaker well worthwhile hearing, he is the executive secretary of the West End Y.M.C.A. also chairman of the committee in charge of Casa Loma and past president of the Kiwanis Club. The table decorations were carried out in the Alumnae colours, mauve and yellow. Each graduate took with her, her mother or a friend.

The December meeting was at the I.O.D.E. on Lowther Ave. As is our custom we hold our Christmas Party at this time. A group

of children from St. Christopher House was entertained and given a gift and a bag of candy.

JEAN C. LINDSAY,
Publicity Convener.

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Toronto Ladies' Dental Auxiliary

"Conditions Among Our Indians in Canada" was the topic of an address given by Brigadier O. M. Martin at the Ladies' Auxiliary to the Academy Luncheon in the Royal York Hotel on Thursday, November 18.

Mrs. A. F. Cooper presided and introduced the speaker. Mrs. Harold Skilling thanked Brigadier Martin on behalf of the Auxiliary.

A Theatre Night was held at The Museum Theatre on Monday November 29. Dr. A. I. Willinsky presented his latest Travelogue "Trinidad Trails." This event was well attended by dentists, their wives and friends. The proceeds amounted to $230.00 will be used to complete the project of equiping a Dental Clinic for the Children's Aid Society, Toronto.

DAISY E. PATERSON

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Detroit's Second Annual Children's Dental Health Day

Sponsored by Detroit District Dental Society

MONDAY, JANUARY 31, 1949
HOTEL STATLER—DETROIT

Presenting for your continuing education a group of outstanding lecturers and clinicians in a comprehensive one-day program packed full of useful, practical information.

PROGRAM

8:30 A.M.—Registration, Ballroom Floor.

9:00 A.M.—Address of Welcome—Dr. Raymond W. Walmoth. President Detroit District Dental Society.

9:15 A.M.—Dr. Ruth Martin—St. Louis, Mo. "Phases of Operative Dentistry for Children and Young Adults."

10:00 A.M.—Dr. Maury Massler, Chicago, Ill. "Thumbsucking—A critical review."

11:00 A.M.—Dr. Robert Kesel, Chicago, Ill. "Present Status of Caries-Prevention Procedures."

12:15 P.M. — LUNCHEON — WAYNE ROOM.

Speaker: Dr. E. T. McSwain, Ph.D., Chicago, Ill. "The Young Patient the Dentist *Doesn't* See." (We suggest you invite your wife to hear this outstanding child psychologist).

2:00 to 3:00 P.M.—Limited Attendance Clinics.

Dr. Ruth Martin
"Treatment of Fractured Permanent Anterior Teeth in Children and Young Adults."
Dr. John Ennever
"Practical Methods of Caries Control."
Dr. Robert Kesel
"The Urea-Dibasic Ammonium Phosphate Dentifrice in Caries Prevention."

3:30 to 4:30 P.M.—Limited Attendance Clinics.

Dr. John Ennever
"Practical Methods of Caries Control."
Dr. E. T. McSwain
"Psychology—An Aid to Good Dentistry."
Dr. Maury Massler
"Mouth Breathing and the Oral Screen."

In addition there will be 15 table clinic groups on such subjects as, amalgam technics, Orthodontics, visual education and practice management, from 2.30 until 5 p.m. Fee for the day, $10.00. Call executive office for reservation—Temple 3-3582.

QUEBEC

Dr. McClelland Tendered Dinner

Professor A. W. McClelland who retired from the staff of McGill University last spring after 33 years of service was tendered a dinner at the Windsor Hotel, Nov. 18, by members of the faculty and others in the profession.

A presentation of a sterling silver tray, suitably inscribed, was made by Dr. O. A. Lefebvre. Dr. A. L. Walsh presided.—*Quebec Star.*

BRITISH COLUMBIA

Preventive Dentistry

A division of preventive dentistry will be established by the British Columbia Department of Health and Welfare with funds provided by the federal government's public health grants, Hon. Paul Martin, minister of National Health and Welfare, announced December 3.

One of a large number of projects planned in the field of general public health, the new division will work toward setting up a province-wide program of dental examination, treatment for children and education.

The proposed division is to be staffed at the outset by a dentist and a dental nurse who will

be responsible for organizing clinics in co-operation with health units and local health services. Wherever possible they will utilize the services of local dentists. The division will emphasize the educational aspects of preventive dentistry—nutrition, daily dental hygiene and regular dental examinations.

The project was advanced by the provincial Department of Health and Welfare, and notice of the federal government's concurrence has been forwarded to the provincial health and welfare minister, Hon. George S. Pearson.

Costs of establishing and operating the division, estimated at about $10,000 until the end of the current fiscal year, will be charged against the $365,000 allotted to British Columbia this year out of the $4,000,000 set aside under the federal health plan for the improvement of general public health services.

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B.C. Dental Association

A business meeting of the Executive Committee of this Association was held recently, in Vancouver, to hear progress on the program for the spring Convention, to be held in Vancouver next May.

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Vancouver and District Dental Society

At the December meeting of this Society an afternoon and evening address was given by Doctor Sicher, of the University of Illinois, of Chicago. For the afternoon meeting, the subject was "The Anatomy of Local Anaesthesia," and following dinner, he spoke on "Complications Associated with the Administration of Local Anaesthesia," as well as continuation of the subject of the afternoon.

Previous to the Association meetings, Doctor Sicher held a class in the various aspects of the anatomy of the oral cavity, and of the temporo-mandibular articulation. These classes have proved popular, and it is believed that the Executive Committee intend to continue with this plan whenever possible.

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Fraser Valley Dental Society

At a recent meeting of this Society, some members of which travel as far as thirty or forty miles to attend meetings held in various towns, it was learned that the assistants accompany their employers to each meeting, and, after dinner together, adjourn to their own meeting in another room. This organization is flourishing under the capable managership of Miss Prendergast, of Haney, B.C., as President, and Miss Shirley O'Brien as Secretary.

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Recreation in B.C.

News from British Columbia at this time of the year would not be complete without reference to recreation. The steelhead run is on, at the time of writing, and good fishing in the coastal streams will continue until early spring. While skiing is excellent, a few thousand feet up on the mountains, golf is flourishing on the lower levels. Come out and see us some time!

L. G. R.

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Vancouver Dental Assistants' Association

The regular monthly meeting of this Association was held on November 8, with Doctor Gould, of the staff of Shaughnessy Hospital, speaking on "Neurosis." A Christmas party was held on December 16.

EMPIRE NEWS

GREAT BRITAIN

Specialization

Whether or not to specialize is a problem which confronts every newly qualified doctor, and in this enlightened, nationalized age, the answer is increasingly difficult to find. However altruistic may have been one's reasons for taking up medicine in the first place, the sordid facts of pounds, shillings and pence have to be reckoned with, and it is becoming increasingly clear that, financially at any rate, specialization is going to pay hands down under the National Health Scheme. That this is so is borne out by the increasing numbers that are now entering for the Membership and Fellowship Courses.

We believe that this trend is an unfortunate one, and is not in the best interests of the profession as a whole. That consultants are necessary, and that they perform an essential task, nobody doubts, but they should be an adjunct to medicine, not the basis of medical practice. An increasing number of their patients are cases which should have been diagnosed and

treated by the G.P., but the G.P. nowadays has insufficient time to deal with, and so "passes on." This vicious cycle is only aggravated by increasing the number of specialists; it can only be broken by increasing the number of experienced General Practitioners in active practice.—*Guy's Hospital Gazette,* Aug. 1948.

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Medical and University Salaries

Ever since the publication of the Spens Report on the remuneration of consultants and specialists it has been obvious that the glaring discrepancies between the salaries of consultants in the National Health Service and those of university professors would inevitably lead to complications. The Vice-Chancellor of Cambridge University has now drawn attention to this in his address to the Senate at the opening of the academic year: "An immediate problem has been raised by the findings of the Spens Report on the remuneration of consultants and specialists. It is, on the face of it, absurd that, whereas the stipends of the majority of Cambridge professors do not rise above £1,550, a specialist appointed to the staff of a hospital is to be guaranteed a salary rising to £2,500 at the 1939 value of money." As £1,450 is the maximal professional salary which the Treasury will recognize, it is clear that there is going to be increasing difficulty in attracting men of ability into the academic world. A subsidiary complication will arise when the Spens scale of salaries is accepted by the Treasury, as presumably the salaries of professors of clinical subjects, such as medicine and surgery, will need to be adjusted to the level of their consultant colleagues. This will mean that in medical schools professors in the clinical departments will be receiving salaries of £2,500 or more per annum, while their colleagues in the preclinical departments will not be able to rise above a maximum of £1,450. This is a state of affairs which the Vice-Chancellor, not unjustifiably, has described as being "not only absurd but intolerable."—*Can. Med. Assoc. Jour.* Dec., 1948.

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A Dangerous Situation

Condensed from Editorial in Br. Dental Journal

It is now almost impossible to exaggerate the seriousness of the position which has developed in regard to the "priority" dental services. From all parts of the country come reports of the resignations of school dental officers, and of the lack of recruits to fill their places. Two large county authorities, for instance, have lost between them a total of thirteen officers in the last three months and expect to lose more. And one large borough reports that it has only three dental officers left to provide inspection and treatment for 35,000 children. The cause of this is not far to seek and the remedy plain. For too long school dental officers have been grossly underpaid, and until their salaries are raised to a level at which they can earn incomes reasonably proportionate to those they could hope to obtain in the General Dental Service, there can be no hope of any improvement in the position, much less of effecting that "big expansion of the dental services available to school children" which the Teviot Committee regarded "as one of the essential foundations of a comprehensive service." Even as things are it will take some time, possibly years, to repair the damage which has already been done. The school service needs for its full development a steadily increasing number of recruits over a number of years. At present not only is it losing personnel but it is also failing to attract any new recruits. And once potential recruits have been lost there can be but little chance that any alteration in the salary scale will subsequently cause them to be attracted into the service.

There would be less ground for alarm if it were possible to believe that parents as a whole were sufficiently alive to the importance of dental care of the young to seek it for their children from private practitioners if it was not available in school clinics. But, although the school service has done much to educate parents in this direction, there is still much to be done before it will be safe to rely on parental discretion in this respect.

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Cost of Dental Service

The Minister of Health, in a written answer to Sir E. Graham-Little, said that the payments for dental treatment, including the supply of dentures, up to September 30, amounted to £1,232,057. This figure did not include the cost of dental treatment provided through the hospital service.—*Br. D. Jour.*

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A Million People Seek Dental Treatment in Two Months

Mr. Aneurin Bevan told the Executive Councils' Association (England) of the National

Health Service, in London on October 7, that in little over two months—up to September 17—more than a million people had sought dental treatment; the rush for spectacles had been so great that it had exceeded productive capacity, and the number of prescriptions dispensed had been "phenomenal."

"Because things are free is no reason why people should abuse their opportunity," he said. "If people who do not really need service demand it, they will be standing in the way of those who need it more."

So far the service had gone "reasonably smoothly," and had been enthusiastically received by the vast majority of people. Virtually all the active general practitioners—the latest figure he had was 18,165—and more than 80 per cent of the dentists—8,039 of a possible 10,000—were now in the scheme. More dentists were entering as the benefits of the service became known.

More than 90 per cent of the population had already signed up with local general practitioners and the figure was being added to day by day. He confidently expected that by the end of the year virtually 100 per cent of the population would be in the scheme.

As time went on the machinery of the service would be revised, the administration simplified and the service improved. If too great a strain was placed on it at the beginning it might be bad.—*Mag. and Oral Topics.*

GENERAL NEWS

A.D.A. Membership Reaches Total of 70,912

Membership in the A.D.A. reached a new high of 70,912 on September 30, a gain of 4,891 over the same date a year ago. Present membership totals include 65,763 active members, 3,379 student members and 1,770 life members.

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A Survey of the Opinion of Dentists

The opinion of fifty-six dentists on a variety of subjects was obtained recently in a study sponsored by the Harris Dental Society, Lancaster, Pa. The study was made by the Wheatland Associates, a public relations counselling firm.

The fifty-six dentists participating in the study reported the following information:

1. Ninety-six per cent of the dentists own an x-ray machine; 20 per cent use the machine in treating every patient; 80 per cent use it as conditions indicate.

2. Seventy-five per cent of the dentists use a vitality tester.

3. Fifty-three per cent charge a fee for an oral examination.

4. All dentists reported they advise filling decayed deciduous teeth.

5. Forty-three per cent favour the retention of possibly infected deciduous teeth to maintain space for permanent teeth.

6. Eighty-six per cent believe oral infection could be one contributing factor in rheumatic fever.

7. Eighty-one per cent would support a plan to have the dental society establish a schedule for minimum fees.

8. Fifty-six per cent would favour an installment payment plan for patients; 31 per cent would not; 13 per cent don't care.

9. Ninety-three per cent believe dentists should give dental care to the needy; 28 per cent prefer that such care be provided in the dental office; 72 per cent prefer a clinic.

10. Dentists ranked third among groups most important to the community in the opinion of the dentists polled. Physicians and teachers ranked higher; clergymen, farmers, manufacturers, workmen, merchants, public officials, bankers and lawyers ranked lower.

The average age of the dentists contributing to the study was 38.1 years; the average number of years in active practice was 13.8 years.

Of the forty dentists reporting income for the year 1947, 10 had a net income of below $5,000 and $10,000 and four a net income of over $10,000. — *Minneapolis District Dental Journal,* Sept., 1948.

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Hospital Insurance Act

"Last April the Legislature of British Columbia passed a new 'Hospital Insurance Act' which undertook to provide hospitalization for everyone in the province in consideration of payments into a Government fund not exceeding $33 per annum for family groups. Now the Government has announced its plan in detail, the Blue Cross is winding up and the insurance companies are advising their policyholders to register under the Government plan.

"Under the Government plan there are no strings attached to the number of times or extent of time you may spend in the hospital, so long as hospitalization is necessary. The money to pay for these services comes partly from premiums of insured people and partly from contributions by the Provincial Government."

The system of financing—Single persons 16 years of age and over will pay $15, the head of a family with one dependent $24, the head of a family with more than one dependent $30, which is the maximum annual premium to be collected. This is expected to total approximately $10,000,000 annually, a figure which will not, by any account, pay for actual cost of hospitalization.

The Financial Post of Toronto and other Canadian papers are strongly criticising the B.C. Government because of its action in providing hospital benefits through tax subsidies at less than cost. One editorial concludes: "The only sound policy is for people to pay, and for Government to charge enough to pay the cost of the service given, and its sound administration. Anything else leads only to trickery and confusion, and the weakening of our economic system."—*Eastern Underwriter* —per Public Health Economics.

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Fluorine Facts and Fallacies

Condensed from Editorial in N.Y. Jour. of D., Dec., 1948

Topical application of fluorine is being given approximately to 50,000 pre-school and school children at Department of Health dental clinics in 105 schools and 14 district Health Centres in New York City.

The facts on the topical application of sodium fluoride after one year of study have been presented by the United States Public Health Service as follows:

"1. The use of calcium chloride as a supplemental treatment does not enhance the caries-inhibitive action of sodium fluoride.

"2. The caries-inhibiting effect obtained when the applications were spaced at one or two a week were found to decrease when the applications were spaced at intervals of three or six months.

"3. Apparently a 1 per cent solution of sodium fluoride is as effective as a 2 per cent solution. However, clinical experience with the prophylactic effect of a 2 per cent solution is at present far more extensive than with solutions of lower concentration.

"4. Application of the fluoride solution to the teeth by means of a spray appears to be as effective as when application is made by cotton applicator."

Studies of the United States Public Health Service have shown that a series of four applications of a 2 per cent solution of sodium fluoride, preceded by a single prophylaxis, effects a 40 per cent reduction in dental caries incidence. Treatments must be repeated for newly erupted teeth. The caries-inhibiting value of topical fluoride therapy is not decreased appreciably during a three year period following treatment. The omission of a dental prophylaxis prior to the series of applications reduces the effectiveness of the treatment by approximately half.

It is important to note that the 40 per cent reduction in dental decay following the topical application of sodium fluoride is only a relative decrease and not an absolute one.

There is great danger that the real benefits of sodium fluoride may be vitiated and denied the children of our country by unwise overenthusiasm. Let us not repeat the mistakes made on previous occasions on the introduction of new methods, materials and procedures into dental practice. The patient should be given all the facts even if they are not glamorous.

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Editorial Comment on Hawley Talk

"On June 20, Dr. Paul R. Hawley, speaking before the presidents and other officers of the various state medical associations, of the U. S. A., warned them that the moment of reckoning was at hand; that the hour was about to strike after which it would be too late for the medical profession in this country to determine its own future course . . . This was a straightforward declaration by the chief executive officer of the Blue Cross and Blue Shield Commissions reiterating the important decision that faces medicine today. This decision is not whether there shall be effected an equitable distribution of medical care or whether a planned medical economy is desirable, but who shall bring about these changes.

"Organized medicine, so-called (a name now changed to the non-committal term medical profession,' a faint but fetid aroma having developed about the term 'organized'), takes

its steps always too reluctantly. It is the conservative bulwark of an ancient calling, and slow motion is almost implicit in its design, each year only those compromises with social reform being accepted that might have been considered progressive in the previous decade. Whether tardy approach is an utter necessity is another matter. Large bodies can sometimes move rapidly in the face of impending disaster.

"The profession of medicine is not on as sure a footing with its public as might be wished; it has so far done less than it could and than it should have done to ensure reasonably adequate medical care to all the people. It must be remembered that some of the criticisms directed toward it in this respect are in a sense a basic compliment. They are an acknowledgment that the services of medicine are considered by the people to be equally indispensable with the various accepted public services and, indeed, the very freedoms that are cherished—pure water and sanitation, police and fire protection, education, freedom of speech and of worship and the privilege of representative government.

"If the medical profession does not assume active leadership, however, in assuring adequate distribution of its services, and that very shortly, its opportunity will be gone. It is the eleventh hour, and there are many that still stand idle outside the vineyard." Editorial "Eleventh Hour," the *New England J. of Medicine,* 239:562 October 7, 1948—per Public Health Economics.

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National Health Week

"Guard Your Health—Know How" once again has been chosen as the slogan for another National Health Week. This time it is Canada's fifth annual observance of this outstanding project in the field of health education in Canada—January 30 to February 5.

National Health Week is sponsored annually by the Health League of Canada in cooperation with official Departments of Health and Departments of Education throughout the nation. Also cooperating are many other voluntary associations.

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Revised Dental Fee Schedule Illinois Public Assistance Programs

Representatives of the Illinois State Dental Society and the Illinois Public Aid Commission have agreed on increases in the dental fee schedule for care given to public assistance recipients.

The following cost standards establish a maximum beyond which an allowance for dental service cannot be approved. It is essential that the County Superintendent determine whether customary charges in a community are less than this maximum. If so, the dentist shall follow his usual fee schedule rather than charging the maximum.

Operative Dentistry

Emergency treatment for relief of pain	$ 2.00
Synthetic porcelain	3.00
Amalgam Fillings	
One surface	3.00
Two surfaces	5.00
Three or more surfaces	7.00
Re-cement inlay or crown	2.00
Re-cement bridge	3.00

Prophylaxis;—(Prophylaxis, or cleaning and polishing of teeth shall be approved only when required for reasons of general dental health.)

First treatment	3.00
Additional treatments	2.00
Total	5.00

(In unusual situations, the County Dental Advisory Committee may approve a higher total fee.)

X-Rays	
Single film	1.00
Subsequent films	.50
Full mouth series	5.00
Minor Surgery	
Anaesthesia, general, in office	2.00
(No charge for local)	
Extraction, simple	
First	3.00
Additional	2.00
Total	30.00
Impacted tooth. Individualized	
Post-operative treatment	2.00

(An allowance for this dental service requires review by the County Dental Advisory Committee. Charges for more than one treatment require review by the County Dental Advisory Committee.)

Prosthetic Dentistry	
Bridgework, per unit	15.00
Repair of vulcanite dentures	
Vulcanizing charge	5.00
Replacing tooth, each, plus vulcanizing	1.00

Adding teeth, each, plus vulcanizing	5.00
Acrylic Dentures	
Full upper or lower	45.00
Partial upper or lower	45.00
Wire clasps, each	5.00
Repair of Acrylic Dentures	
Processing	8.00
Replacing tooth, each, plus processing	1.00
Adding tooth, each, plus processing	5.00
Rebasing, including processing	18.00
Duplicating, including processing	25.00

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Controversy Reported in Belgium

"A most acute controversy has arisen between the Belgian Medical Federation and the Secretary of the Treasury (Minister of Finances). The creation of a fiscal note book for all the fees collected by the physician, in which the nature of the fee should be indicated for those who are subjects of insurance against diseases, has caused a general revolt of the medical profession. In fact, the fiscal inquiry makes medical secrecy, which is the basis of professional ethics, meaningless to a larger extent than it is realized. The great Belgian medical association, Federation Medicale Belge, has realized an impressive referendum: 6,000 of 8,000 practitioners have declared themselves ready to support the claim and to refuse the use of the fiscal notebook. By an important majority the representatives of the general assembly have decided that in case penalties should be imposed on the physicians, the Belgian Medical Federation immediately will go on administrative strike.

"This administrative strike will consist of not filling out any administrative papers except: (*a*) medical prescriptions on personal stationery; (*b*) testimony ordered by articles 55 to 57 of the Civil Law and article 361 of the Criminal Law compelling the physician to report a birth in the absence of the father, and (*c*) reports of contagious diseases (royal ordinance of June 10, 1922). If physicians should be imprisoned, the Belgian Medical Federation will not hesitate to declare a strike, withholding medical attendance except for emergency cases.

"This unanimity of the members of the medical profession and this firmness provide a good outlook in the fight against the progress of state management of medicine. In fact, if the medical profession continues this united resistance, it will have the experience—and this will be a convincing one—of the immense advantage which the abolition of payments by a third party would involve for the profession. In the present circumstances the doctor gets his fee from the patient and ignores the entire organization of insurance against disease or mutual insurance which should pay in his stead. It is a return to the total emancipation of medicine, a situation which should never have been abandoned if medicine was to remain a free and justly honoured profession." *J. of the American Medical Association*—per Public Health Economics.

•

Showdown Battle over Compulsory Health Insurance Looms in the U.S.A.

Health Professions Marshall Resources To Oppose Ewing Plan.

In a secret session held Dec. 1 at St. Louis, the House of Delegates of the American Medical Association voted a special assessment of $25 per member to fight government control of health programs. Based on A.M.A.'s present membership of 140,000 physicians, the assessment would provide a total fund of $3,500,000 for what A.M.A. delegates termed an "educational campaign."

Battle lines are taking shape over the issue of compulsory health insurance. Proponents of the measure, which has been bandied about in congressional committees for several years, are interpreting the Nov. 2 election as a "mandate" for its immediate enactment. Leaders of the health professions involved have been equally alert in pointing out the basic fallacies of a national scheme which glibly promises health care without regard to the basic facts regarding professional resources. Leaders of the A.D.A. and the A.M.A., are marshalling their forces for an all-out battle when compulsory health insurance is brought up in Congress.—*A.D.A. News* release.

•

Health in the Far East

Health conditions in the Far East have deteriorated critically as an aftermath of the Japanese occupation and the continuing political disorders in several of the countries, Dr. Thomas Parran, former Surgeon General, reported August 18. Dr. Parran has just completed a two months' tour of India and the

Pacific area for the United Nations—the first medical survey of the Far East undertaken on an international scale since the war. The study was undertaken, he explained here, to determine the best methods for utilizing the $3,300,000 grant which the United Nations Children's Emergency Fund has just allocated to the Far East countries, outside of China which will be assisted with a separate $12,000,000 program.

The $3,300,000 voted for Far East aid will be a drop in the bucket compared with the needs of the population of 650,000,000. To make the fullest use of the limited resources available, the children's fund has decided to allocate its funds not for mass-feeding as in its European assistance program but rather to give urgently needed medical aid and to train persons to teach others. For example, $300,000 will be used to send medical teams throughout the area to teach methods for arresting malaria. The difference between the two programs, Dr. Parran said, is that in Europe the fund supplies food to needy children through mass-feeding in twelve countries. In the Far East the need is so much greater that only those children already hospitalized or sick from malnutrition can be aided.—*New York Times*, 97:9 August 19, 1948—per Public Health Economics.

I have told you of the man who always put on his spectacles when about to eat cherries, in order that the fruit might look larger and more tempting. In like manner I always make the most of my enjoyments, and, though I do not cast my eyes away from troubles, I pack them into as small a compass as I can for myself and never let them annoy others.—Robert Southey.

IN MEMORIAM

Ira Bower, of Ottawa, aged 88, died November 14.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1890 and had practised continuously in Ottawa.

He was an alderman of Ottawa City Council from 1910-1912. He was President of the Eastern Ontario Dental Association in 1896. He was a life member in the Masonic Order and a member of the United Church.

Dr. Bower is survived by his widow.

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Wilbur Harold Gilroy, of Mount Forest, Ontario, aged 59, died December 4.

A veteran of World War 1 he served overseas in the Dental Corps and later in the Air Corps. He was chairman of the water and light commission, a member of the Public Library Board and the Board of Education. He was a member of St. Alban's Lodge No. 200, A.F. and A.M. and the Mount Forest Lions Club. He attended Mount Forest United Church.

Dr. Gilroy is survived by his widow, a son, two daughters, two brothers and a sister.

•

Aime Lantier, of Quebec City, aged 88, died November 22. He was graduated from New York Dental College in 1883 and practised his profession in Quebec for approximately 55 years.

He served 8 terms as alderman and for several years was Director of Finances and leader of the city council. He resigned in 1922 to become the first director of the Municipal Dental Clinic which post he held until his retirement 4 or 5 years ago.

Dr. Lantier is survived by his widow, four sons, two daughters, 21 grandchildren and 9 great-grandchildren.

•

William Joseph Loftus, of St. Catharines, Ontario died on October 10 at the age of 75. He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1904 and immediately began practice in Ontario where he continued until his death.

He was a member of St. Catharines Roman Catholic Church, a member of the Holy Name Society and of the Knights of Columbus. For many years he was a member of the Separate School Board and served for at least one term as chairman.

He is survived by his widow, three daughters and two sons.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

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Les Granulômes pulpaires ou pulpômes*

(essai de synthèse clinique, radiologique et histologique)

par MAURICE BOUYSSOU**, Dr Méd. Stom., Toulouse, France

"Ce que nous appelons maintenant exception est simplement un phénomène dont une ou plusieurs conditions sont inconnues."
CLAUDE BERNARD
(Introduction à la Médecine Expérimentale)

Des nombreux problèmes, que pose la pathologie dentaire, un des plus obscurs est bien celui des granulômes pulpaires ou pulpômes.

Ces formations hyperplasiques développées aux dépens du tissu pulpaire sont, il est vrai, de notion assez récente. Elles n'ont encore suscité qu'un nombre restreint de travaux et presque tous radiologiques, parce qu'elles se rencontrent rarement et que la dent en cause, nécessaire à l'examen histologique, ne saurait être extraite chaque fois pour de simples raisons de curiosité scientifique.

Le but de ce travail est de faire la synthèse de notions encore éparses ou fragmentaires, pour dresser un tableau d'ensemble des caractères actuellement connus de cette maladie, en l'illustrant par des observations personnelles.

Cette affection, qui peut atteindre les dents temporaires tout comme les dents permanentes, est connue sous des vocables très divers. En Grande-Bretagne, Mummery[1,2], qui l'observe le premier en 1920, la nomme "pink spot" en raison de la tache rosée qui manifeste sous l'émail l'existence de la tumeur, puis il adopte, en 1926 le terme de "chronic perforating hyperplasia of the pulp". On la retrouve ensuite en Allemagne, où Schweitzer[3] l'appelle, en 1931, "Interne Granulôme der Zahnpulpa". En Italie, c'est la "Pulpite granulômateuse hyperplasique interne" (Palazzi[4]). Aux Etats-Unis, c'est l' "Internal resorption of teeth" (Thoma[5], Soifer[6], Applebaum[7]) ; en France le "Pulpôme" ou "Granulôme pulpaire" (Cadenat[8], Dechaume[9], Bouyssou[10,11,12]).

Ces multiples vocables désignent une seule et même lésion, dont la situation, les aspects cliniques et radiologiques sont variables, mais répondent à une *formule histologique identique.* C'est cette dernière qui caractérise et définit le pulpôme en tant qu'individualité nosologique.

Elle résulte de la transformation d'une partie quelconque de la pulpe en un tissu conjonctif jeune, hyperplasié et hyperémié, où la prolifération des éléments réticulo-endothéliaux fait apparaître des histiocytes spéciaux (ostéoclastes), au contact desquels *l'ivoire subit une résorption progressive.*

Le foyer de résorption peut être *médian* et revêtir une forme sphérique ou ob-

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**Ancien Chargé de Cours à la Faculté de Médecine de Nancy.

longue, centrée sur l'axe pulpaire. Il peut aussi être orienté *latéralement* et se développer vers un point quelconque de la périphérie à partir de cet axe pulpaire.

Il peut siéger en hauteur, à *n'importe quel niveau,* coronaire, cervical, radiculaire ou apical.

La figure 1 donne un schéma synoptique de ces diverses localisations ou orientations.*

Ajoutons que la lésion peut atteindre simultanément plusieurs dents, ou deux points distincts d'une même dent, que les incisives et canines supérieures paraissent les plus souvent atteintes, enfin que les dents incluses elles-mêmes n'en sont point exemptes.

Enfants, adolescents et adultes des deux sexes semblent être indifféremment frappés.

Etude Clinique et Radiologique

La sémiologie des granulômes pulpaires est en général très fruste, sinon nulle et leur diagnostic résulte souvent d'une trouvaille radiologique. Cette pauvreté de symptômes explique, du reste, la rareté des cas signalés.

Les données statistiques indiquent à cet égard des chiffres discordants. G. Schweitzer, sur un total de 2100 dents examinées, n'a rencontré en effet que 4 cas authentiques de "granulôme interne". Par contre, Mezl a trouvé sur 2800 dents extraites 46 cas de résorption centrale de l'ivoire à divers niveaux. Presque tous ces foyers étaient restés muets cliniquement.

C'est en effet la localisation du pulpôme, qui conditionne son aspect clinique, ses formes évidentes ou cachées.

1. Formes coronaires et cervicales

Ce sont les pulpômes coronaires centraux qui ont frappé les premiers observateurs, car ils sont particulièrement spectaculaires.

Il s'agit, classiquement, d'une dent antérieure sur laquelle on voit apparaître peu à peu une *tache rosée* ("pink spot" de Mummery) siégeant au centre de la face vestibulaire. Cette aire à peu près circulaire s'accroît très lentement, en même temps qu'augmente l'intensité de sa coloration. Ce n'est pas l'émail qui est coloré, car un examen attentif montre que la couleur transparaît grâce à la translucidité de la coque adamantine. Au bout d'un certain temps, de plusieurs mois en général, cette coque se perfore spontanément par l'intérieur et l'on voit apparaître dans ce pertuis un bourgeon charnu, rouge, dont le contact presque indolore provoque une légère hémorragie.

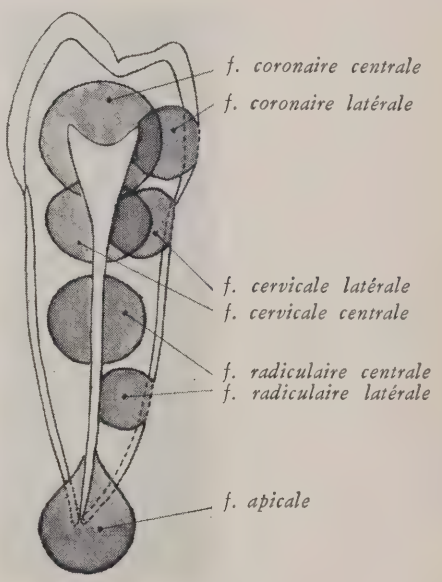

FIG. 1
Localisations anatomiques des granulomes pulpaires

Pendant toute cette période, les signes subjectifs ont été à peu près nuls, réduits à quelques algies fugaces, d'ailleurs inconstantes. On peut noter aussi que la dent réagit plus faiblement que les autres aux tests de vitalité thermiques et électriques.

C'est là la forme clinique centrale classique, celle qui ne passe jamais inaperçue.

Cependant, il n'en va pas toujours de

*Nous avions en 1944 proposé une classification basée sur la localisation anatomique. Plus récemment, Jeanneret [13] a classé les granulômes pulpaires en trois groupes: A) coronaire, a pulpe vivante; B) radiculaire, à pulpe vivante pouvant ensuite se nécroser; C) radiculaire, évoluant vers le ligament par perforation de la racine. Sur le schéma que nous présentons aujourd'hui figurent toutes les localisations et orientations évolutives réellement constatées de cette maladie.

même. En particulier, l'évolution peut rester totalement ignorée du sujet, soit que la dent en cause soit trop postérieure, soit que la lésion n'affecte qu'une partie de la pulpe coronaire et qu'elle évolue vers un point correspondant de la périphérie: c'est la *forme latérale.*

Dans ce cas, la tache rosée peut être très petite, ou siéger dans une région inaccessible au regard et la lésion ne sera découverte alors que par l'apparition d'un pertuis de l'émail.

Les formes à localisation *cervicale* évoluent de même sans signaler leur présence autrement que par cette ouverture punctiforme qui finit par s'établir, déterminant l'évolution ultérieure de la lésion.

L'existence d'un tel pertuis est constante dans les granulômes pulpaires coronaires et cervicaux évolués. Nous l'avons toujours observée et l'on doit, à notre avis, la rechercher systématiquement en cas de doute clinique ou radiologique.

L'orifice se trouve, selon le cas, sur le bord libre des incisives ou des canines, sur une des faces de la couronne, sur le pourtour du collet. Il peut siéger dans un sillon intercuspidien, où l'introduction de la sonde suffit parfois à fracturer en deux parties la coque d'émail qui recouvre la tumeur pulpaire.

Evolution

Les granulômes coronaires et cervicaux évoluent en général de manière identique. La tumeur a mis un temps variable, six mois, un an et plus, pour atteindre le revêtement adamantin et le perforer, ouvrant le foyer interne dans le milieu buccal.

Le processus de résorption ne s'arrête pas toujours pour autant, car l'orifice est occupé par un bourgeon de tissu conjonctif embryonnaire, hyperémié, résistant aux agents microbiens. Le pulpôme continue donc à résorber les parois de la cavité et de l'orifice, jusqu'au moment où l'infection secondaire, venue du milieu buccal, finit par provoquer la *nécrose* de ce tissu de granulation et met un terme à son activité. Le bourgeon exposé devient d'abord jaunâtre et s'élimine, puis la fonte purulente gagne la profondeur, laissant désormais vide la cavité primitivement occupée par la tumeur.

Mais les choses ne se passent pas toujours ainsi. Exceptionnellement, en effet, lorsque le pulpôme a atteint un certain volume, les phénomènes congestifs qui entretiennent son activité peuvent cesser ou se modifier, la résorption s'arrêter et ce tissu de granulation *se calcifier secondairement,* pour oblitérer la cavité pathologique intradentaire (K. H. Thoma[5], Warner et collab.[29]).

La lenteur de cette évolution et ses deux modes de terminaison s'expliquent, comme nous le verrons, par la nature histopathologique du processus (résorption rythmique avec alternatives d'apposition).

Elle peut être cependant accélérée ou se terminer prématurément par un accident mécanique: la fracture intercurrente de la couronne risque en effet de se produire si les parois en ont été trop amincies par la tumeur, notamment dans les formes centrales extensives.

Il semble bien que presque tous les cas de cette première espèce aboutissent en dernière analyse à la nécrose pulpaire et l'on peut dès lors assister aux complications habituelles et prévisibles de cette dernière: monoarthrites, granulômes ou kystes apexiens banaux.

Diagnostic

Le diagnostic des pulpômes coronaires est évident lorsqu'il existe une tache rosée. Aucune autre affection dentaire ne réalise cette apparence si particulière, véritablement pathognomonique.

Mais la tache rosée peut manquer; nous l'avons déjà dit. Le diagnostic repose alors sur la constatation du pertuis coronaire ou cervical que se forme tôt ou tard, mais ne manque pratiquement jamais. On peut certes le confondre avec une carie, d'autant plus que l'hémorragie révélatrice peut manquer si la nécrose pulpaire s'est déjà produite.

La *radiographie* lève en général les doutes lorsque l'examen clinique n'a pas apporté l'évidence. Elle fait souvent le diagnostic à elle seule dans les cas insoupçonnés ou qui échappent à toute autre investigation.

L'image radiologique est caractéristique. C'est celle d'une cavité le plus souvent sphérique ou ovoïde, située au centre ou sur un côté de la couronne et limitée par

une paroi très amincie (fig. 2, 3, 5). Mais il faut savoir que certaines formes latérales peu extensives, orientées dans le sens vestibulaire ou lingual, sur le trajet même des rayons, projettent leur image sur celle de la chambre pulpaire et se confondent avec elle.

FIG. 2
♀ 48 ans, D^3
forme coronaire centrale

Il est intéressant de remarquer à ce sujet que même dans les formes volumineuses, l'image primitive, normale, de la chambre pulpaire reste visible sur les clichés pendant presque toute l'évolution de la tumeur et se superpose à l'image de la cavité pathologique (fig. 2, 3, 5). Cet aspect est dû, comme nous le verrons, à la persistance partielle de la paroi primitive de la pulpe, qui se résorbe souvent plus tardivement que les couches plus externes de l'ivoire.

2. Formes radiculaires et apicales

Les signes déjà si discrets, qui manifestent l'existence d'un pulpôme coronaire, se réduisent à presque rien pour les formes radiculaires et apicales que nous cache toute l'épaisseur du périodonte.

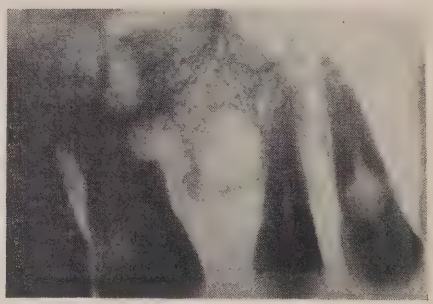

FIG. 3
♂ 46 ans, G^3
forme cervicale centrale

Les signes subjectifs sont en général trop faibles pour attirer l'attention du sujet. Il n'y a plus, et pour cause, de tache rosée, ni de pertuis révélateur.

Mais ce dernier est très souvent remplacé ici par une *fistule,* située sur la gencive vestibulaire, en regard du siège de la tumeur. Elle est en général punctiforme, sans réaction inflammatoire localement visible, et souvent difficile à trouver pour cette raison. Elle peut, semble-t-il, se

FIG. 4
♀ 40 ans, G^3 *incluse*
forme coronaire centrale

constituer à bas bruit, car on ne retrouve pas toujours dans l'anamnèse d'épisode aigu, de poussée phlegmasique. La suppuration à laquelle elle donne issue n'est pas perceptible, tant elle est discrète. Cependant il y a un trajet, que l'on peut suivre, et qui amène le stylet au foyer de la lésion causale, comme la radiographie le vérifie.

Cette fistule est l'équivalent du pertuis des formes coronaires; *elle traduit l'extériorisation* du granulôme pulpaire, qui a atteint le périodonte après avoir franchi le cément.

Cependant, la fistule est inconstante, certains pulpômes centraux de la racine pouvant évoluer sans suppuration.

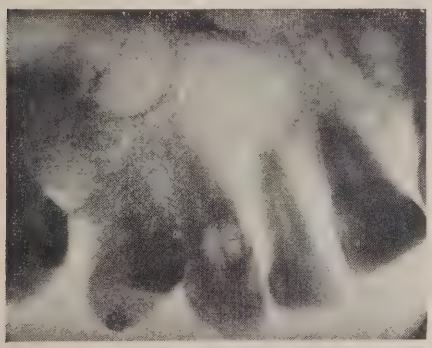

FIG. 5
♀ 44 ans, D^3
forme cervicale latérale

Evolution

Les granulômes pulpaires radiculaires n'évoluent pas en effet d'une façon univoque.

La plupart du temps, le tissu de bourgeonnement s'accroît lentement, il résorbe localement et successivement les divers tissus qui l'environnent (ivoire, cément, ligament péridentaire, os alvéolaire), en se substituant à eux.

Sa masse fait ainsi progressivement saillie hors de la racine, son accroissement se poursuit dans la partie voisine du périodonte, sans doute à la faveur de poussées congestives successives, jusqu'au moment où l'une d'elles, plus forte que les autres, provoque la térébration de l'os alvéolaire et l'apparition d'une fistule sur la muqueuse.

Cette fistule joue dès lors le rôle de "soupape de sûreté", toute nouvelle poussée inflammatoire trouvant un exutoire dans cette suppuration indéfinie, librement propagée à travers l'os. La tumeur cesse en général de s'accroître, et les choses peuvent en rester là pendant des années.

Dans d'autres cas, en vérité plus rares, la suppuration ne se produit pas. Les poussées hyperémiques se ralentissent peu à peu; la masse de tissu conjonctif jeune se transforme lentement et finit par s'ossifier (Euler[14]). Une telle terminaison n'a rien de surprenant, puisqu'on peut l'observer aussi sur des granulômes paradentaires banaux.

Si la lésion initiale siégeait au centre de la racine, le résultat final, macroscopique, sera une résorption radiculaire avec ou sans ankylose ostéo-cémentaire. Si la lésion était latérale, l'ankylose sera très localisée, limitée au petit foyer primitif sur le côté de la racine.

Diagnostic

Il est impossible d'affirmer par la seule clinique l'existence d'un granulôme pulpaire radiculaire. La présence d'une fistule est trop banale, réalisée trop habituellement par toutes sortes de monoarthrites, pour qu'on puisse lui reconnaître quelque valeur diagnostique. D'autre part, cette fistule peut manquer et rien ne vient alors éveiller l'attention sur le processus qui se poursuit silencieusement au sein des tissus.

On doit remarquer à ce sujet, et cela constitue un signe de présomption, que la dent continue à réagir plus ou moins aux excitations thermiques et électriques, alors même qu'il y a une fistule. L'existence de granulômes paradentaires sur des dents vivantes, bien qu'exceptionnelle, diminue toutefois la valeur de cette indication.

En fait, un tel diagnostic est toujours purement *radiologique* et très souvent fortuit. Seule, la radiographie permet de localiser la lésion, d'en préciser l'origine et la nature, d'en suivre l'évolution.

Lorsque le foyer est centré sur le canal radiculaire, sa forme est en général sphérique ou ovalaire, mais il peut s'allonger, élargir le canal sur toute sa longueur, rappelant alors l'aspect des premiers stades de la calcification radiculaire; cette image,

très particulière, est facilement reconnue (Euler[14]).

Il n'en est pas de même des pulpômes latéraux et apicaux, dont l'image radiologique imite au premier abord celle des granulômes banaux latéro-radiculaires ou apexiens.

Cependant, un examen plus attentif du cliché montre que la zone de raréfaction n'affecte pas seulement l'os alvéolaire, mais aussi une partie de la racine avec le canal pulpaire comme point de départ (fig. 6). La portion radiculaire résorbée peut être plus ou moins étendue, siéger à divers niveaux, si bien que l'on a pu considérer que la lésion tirait son origine d'un canal radiculaire accessoire (Lepp[15]).

FIG. 6

♂ 18 ans, D^2
forme radiculaire latérale
(diagnostic vérifié ensuite par la résection apicale)

Quant au pulpôme apical, individualisé par notre maître, le Pr Cadenat, son aspect rappelle celui du granulôme apexien classique, à première vue tout au moins. Mais l'image du pulpôme ne "coiffe" pas l'apex: en réalité, c'est au contraire l'extrémité radiculaire qui coiffe le pulpôme. Le canal pulpaire *s'évase* en effet à l'apex et ses parois se prolongent avec celles de la poche pathologique qui paraît en sortir comme une bulle de savon sort d'un chalumeau (fig. 1).

Etude Histologique

Pour comprendre le mécanisme de ces accidents et leurs divers aboutissements, il faudrait étudier les lésions à toutes les phases de leur évolution.

Cette étude est difficile. Certains auteurs, dont le Pr Dechaume[9], ont pu suivre cliniquement et radiologiquement un pulpôme d'un bout à l'autre de son développement. Histologiquement, il n'en va plus de même, une telle observation dans le temps étant évidemment impossible. D'autre part, l'extrême début, le primum movens nous échappe toujours: nous ne pouvons observer la lésion que quand le diagnostic est fait, c'est à dire quand elle est constituée depuis longtemps.

Cependant, les exemples qui suivent permettent de se faire une idée des mécanismes complexes qui interviennent dans cette affection, tant au cours de son développement qu'à sa période terminale.*

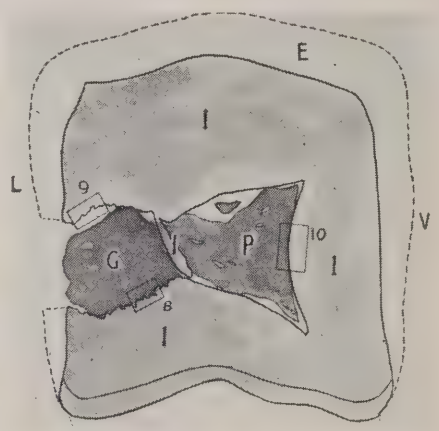

FIG. 7

Diagramme d'un pulpome coronaire latéral
♂ 46 ans, g^8
E, émail (disparu lors de la décalcification)
I, ivoire
P, pulpe
G, tissu de granulation
□□ microphotographies des fig. 8, 9 et 10

1. Phase initiale ou d'hyperplasie

On peut dans certains cas saisir le processus peu après son début, alors qu'il est déjà en pleine activité. C'est ainsi que notre premier diagramme représente un pulpôme coronaire évoluant latéralement,

*Les coupes qui figurent dans ce travail ont été obtenues par la technique habituelle: fixation au Duboscq, décalcification dans l'acide nitrique à 5 p. 100 (10 jours), inclusion à la paraffine, coloration à l'hematoxyline-éosine. Nous tenons à remercier notre ami le Dr Ch. Bimes, Dr ès Sc., chargé de cours d'Histologie, pour les microphotographies qu'il a bien voulu en faire dans le laboratoire de M. le Prof. Riser.

qui venait de s'ouvrir sur la face linguale d'une molaire permanente. Il était invisible sur les radiographies et ne pouvait être décelé qu'en explorant son orifice à la sonde.

Son point de départ se trouvait sans doute au niveau d'une corne pulpaire; de là, la résorption avait atteint la périphérie, mais sur une aire très réduite.

Les sections orientées selon l'axe de l'orifice (fig. 7) montrent qu'une mince lame d'ivoire restée intacte sépare la pulpe proprement dite du foyer granulômateux (nous n'avons pu malheureusement retrouver la petite brèche de communication sur une coupe utilisable).

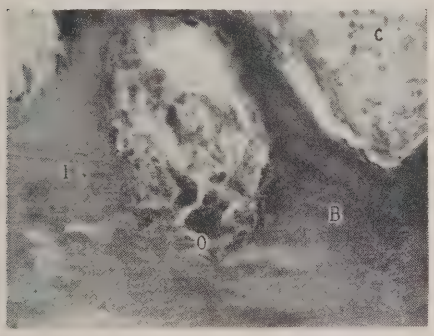

FIG. 8

I, ivoire (tubuli et fibrilles de Tomes en section longitudinale)
C, tissu de bourgeonnement (conjonctif pulpaire hyperplasié)
O, ostéoclaste
B, zone d'apposition (néoformation ostéoïde)
(x450)
inclusion : paraffine
coloration : hématoxyline-éosine

Dans la zone de résorption, on reconnaît la structure habituelle de l'ivoire, mais celui-ci est érodé soit parallèlement, soit perpendiculairement à la direction des canalicules, par des poches ou des digitations remplies de tissu conjonctif jeune, myxoïde, infiltré de petites cellules rondes et présentant de nombreuses images de sections vasculaires. A l'extrémité d'une de ces digitations, qui forme un véritable boyau, sectionné obliquement par la coupe, on voit un des agents de ce processus d'érosion, sous la forme d'un ostéoclaste de grandes dimensions, à noyaux multiples (fig. 8).

Sur le pourtour de l'orifice, on trouve d'autres polycaryocytes inclus dans des lacunes de Howship; ce sont des ostéoclastes qui ont été probablement séparés de la masse granulômateuse lors de l'exploration par la sonde (fig. 9).

Cette érosion lacunaire ne se poursuit pas d'une façon continue ou uniforme. En effet, au voisinage même d'une zone en voie de résorption, on peut trouver des plages de tissu ostéoïde, avec des éléments figurés ovoïdes, semblables aux ostéocytes jeunes (fig. 8). Ces formations calcifiées, en continuité avec l'ivoire, représentent des aires d'apposition réparatrice (mécanisme inverse de la résorption). Elles témoignent d'un processus rythmique, résorption et apposition pouvant se

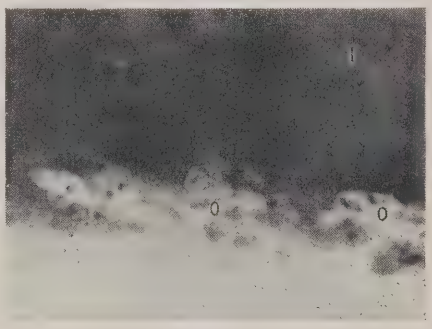

FIG. 9

I, ivoire
O, ostéoclastes logés dans des lacunes de Howship (x340)

succéder alternativement selon la période ou la zone considérées.

La plupart des auteurs qui ont étudié histologiquement cette affection admettent que les caractères du tissu pulpaire se modifient globalement dès le début et qu'en particulier les odontoblastes disparaissent très rapidement. En réalité, la pulpe ne perd sa différenciation que peu à peu, au fur et à mesure que de nouvelles aires se transforment en tissu de granulation. C'est ainsi que l'on peut voir sur la coupe précédente une pulpe camérale en partie conservée: la couche odontoblastique manque à certains endroits, mais elle persiste sous son aspect normal dans les régions éloignées de la zone envahie (fig. 10). Le stroma pulpaire est atrophique et vacuolaire, les éléments en sont épars et peu chromophiles; les images vasculaires, peu nombreuses, commencent à se multiplier au voisinage

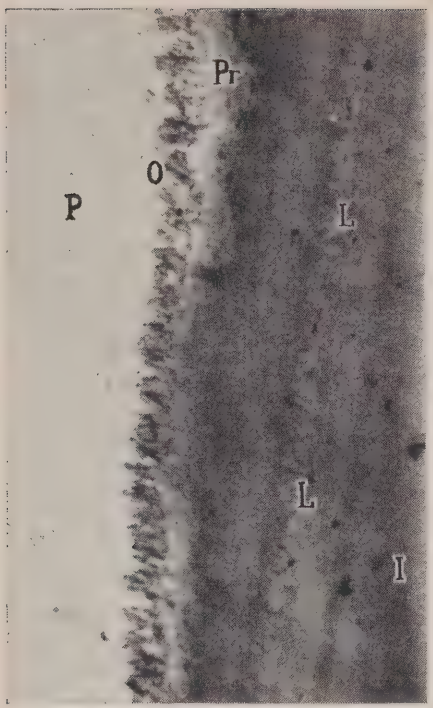

FIG. 10

I, ivoire
Pr, prédentine
O, odontoblastes
L, Lignes de contour d'Owen
P, tissu pulpaire
(x300)

du foyer de résorption. Il est évident que cette poussée vasculaire joue un rôle primordial dans la propagation et l'entretien du processus.

2. Phase terminale: nécrose ou organisation conjonctive

La période terminale des pulpômes commence au moment où s'arrête le bourgeonnement conjonctif et la résorption correspondante des tissus calcifiés environnants. Cet arrêt peut être provoqué, nous l'avons dit, soit par une nécrose due à l'infection secondaire, soit par des modifications histologiques aboutissant à une métaplasie.

On peut donc assister à l'une ou à l'autre de ces deux éventualités.

La lésion représentée par le diagramme suivant (fig. 11) offre cette commodité que les deux terminaisons peuvent y être observées simultanément. D'une part, en

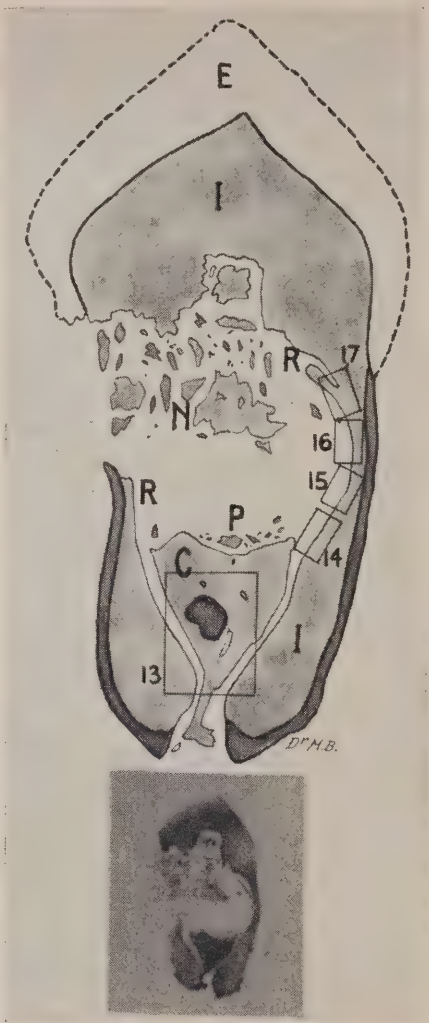

FIG. 11

Diagramme correspondant à la radiographie de la fig. 12.
I, ivoire
R, surface de l'ivoire résorbé
E, émail (disparu lors de la décalcification)
C, tissu conjonctif en voie d'organisation
P, polynucléaires agglomérés
N, débris nécrotiques
□□ microphotographies (fig. 13, 14, 15, 16, 17)

effet, la nécrose a été incomplète et d'autre part la réorganisation conjonctive y était déjà ébauchée.

Il s'agit d'un pulpôme central à forme extensive, développé dans une canine temporaire de couleur grisâtre, qui persistait sur l'arcade supérieure d'un garçon de 15 ans. *(à suivre)*

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Le dentisterie chez les enfants

La Ligue d'Hygiène Dentaire de la Province de Québec Inc., comme on le sait, fait un travail efficace de propagande au sein de la population de notre section du pays en faveur de l'hygiène dentaire.

Tous les moyens de réclame intelligente sont utilisés par cet organisme pour introduire dans les familles des données saines de santé buccale et dentaire. Journaux, T. S. F., correspondance, tous ces médiums de publicité, sont au service de cette Ligue et contribuent au développement de l'hygiène des dents, qui, au sus de tous, n'est pas des plus brillantes, chez nous.

Dans ces causeries ou ces communiqués, on appuie sur l'importance de sauvegarder l'intégrité des dents des enfants et d'ancrer dans l'esprit de ces petits des habitudes d'hygiène, qui dureront toute leur vie.

La Ligue entretient, de plus, un Secrétariat, où on invite les citoyens à envoyer l'exposé de leurs problèmes d'ordre dentaire et à poser toutes les questions susceptibles d'augmenter leurs connaissances prophylactiques.

L'intérêt suscité par ce Secrétariat chez les profanes est considérable; toutes les semaines, on répond à une centaine de lettres demandant des renseignements de toute nature et des éclaircissements sur des questions d'ordre pathologique et curatif. Dans cette correspondance, la remarque la plus fréquente concerne les enfants et les traitements de leurs dents par les dentistes. On se plaint de la difficulté qu'éprouvent les parents à faire traiter les dents de leurs enfants. On se promène, rapporte-on, de cabinet en cabinet, sans réussir à trouver un dentiste, qui entreprenne la réhabilitation des bouches enfantines avec des moyens autres que les extractions en masse.

Les parents sont déconcertés en face des indications et des directives, qui leur sont offertes, de bonne foi, par la Ligue, et du désintéressement inex-

plicable et de l'apathie négative de certains membres de la profession, qui refusent d'accepter leurs enfants à leur bureau.

Cette attitude est difficile à comprendre. On ne saisit pas bien les raisons, qui portent quelques confrères à négliger cette clientèle enfantine.

On peut alléguer les difficultés, parfois quasi-insurmontables, présentées par les traitements des dents de certains enfants; on peut mettre de l'avant l'incompréhension pécuniaire des parents pour des soins temporaires à des dents temporaires. En effet, trop souvent, on veut que les honoraires soient en rapport direct avec la taille des patients.

Ces motifs ne sont pas sans fondement et méritent qu'on les étudie à fond. Mais il faut penser aussi aux nombreux avantages des traitements des dents temporaires.

Il y a d'abord un devoir de concience de traiter les premières dents; car, personne mieux que le dentiste, connait les inconvénients de la perte prématurée de ces dents.

Le travail fécond de la Ligue exige que tous les membres de la profession dentaire appuient son enseignement. Les conseils donnés par cet organisme, basés sur la science et l'expérience, doivent être appuyés et réalisés par les dentistes.

Les confrères doivent comprendre que la Ligue travaille aussi dans leur intérêt et que ces petits patients d'aujourd'hui seront leurs patients adultes de demain.

Nous devons nous oublier parfois pour produire une génération future saine et forte. Là réside notre devoir social en tant que professionnels, qui jouons un rôle dans le maintien de la santé de nos populations.

Quelques confrères ont pu négliger cet apport à leur clientèle dans ces années de guerre, où ils avaient plus de besogne qu'ils pouvraient en abattre. Cette période est révolue. Déjà des signes nous indiquent la fin de cette prospérité. Il est temps de songer à combler les vides, qui se produiront dans nos journées: la clientèle enfantine est là; elle attend nos bons offices.

GERARD DE MONTIGNY.

Collaboration étrangère

Nous voulons souligner la parution, dans cette livraison de notre Journal, d'un article original, préparé à l'intention des canadiens-français, par un distingué confrère français, le Dr Maurice Bouyssou.

Cette collaboration nous honore et est de nature à cimenter les liens, qui nous unissent déjà à nos confrères français, par la langue, l'esprit et les origines.

Nous souhaitons vivement un échange scientifique entre nos deux pays et ce premier pas est de bon augure pour l'avenir.

GERARD DE MONTIGNY.

Dans le monde dentaire

Nouvelle Société Dentaire, dans le Québec

Les dentistes de la région de Joliette ont fondé, lors d'une réunion tenue le 10 novembre, une Société Dentaire, dont les buts sont éducationnel et coopératif.

Le comité exécutif de cette nouvelle Société Dentaire de Joliette est composé des membres suivants: Président: L. Benny, Joliette; Vice-Président: P.-E. Perreault, L'Assomption; Secrétaire:: Paul Dionne, Joliette; Trésorier: Edouard Gervais, Joliette; Directeurs: D. Massicotte, Joliette, G. Pagé, Berthier, Marsolais, L'Ephiphanie, Bruno Charbonneau, Montcalm.

Société Dentaire du Saguenay

La Société Dentaire du Saguenay a tenu à Chicoutimi, samedi, le 13 novembre, sa dixième réunion, depuis sa fondation, qui remonte au mois d'octobre 1944.

Au cours de la dernière réunion, à laquelle assistaient une quinzaine de dentistes de la région du Saguenay, on précéda à l'élection du nouveau bureau de direction pour la prochaine année. Les officiers élus furent les suivants: Président: Chs-Eug. Massicotte, Chicoutimi; Vice-président: Léo Ratelle, Roberval; Secrétaire-trésorier: J. A. Desbiens, Chicoutimi.

Société Dentaire des Trois-Rivières

Le vingt novembre, sous la présidence du docteur F.-X. Lacoursière, la Société Dentaire des Trois-Rivières recevait à son gala annuel, au Chateau De Blois. Une centaine de confrères assistaient à cette réunion, où toutes les associations dentaires de la province de Québec étaient représentées.

A l'issue du dîner, M. Pierre-François Deffontaines, professeur de géographie et d'histoire à l'Université, de Québec, offrit une conférence intitulée: "Les loisirs à la maison". Les docteurs Yves Dufresne et Conrad Godin présentèrent et remercièrent le conférencier.

Taxes sur les pâtes dentifrices

On a fait part à l'A.D.C. que les manufacturiers de pâtes ou de poudres dentifrices doivent sous peu augmenter substantiellement le coût de leurs produits à cause d'une taxe fédérale dont ceux-ci sont frappés et qu'une diminution de cette taxe abaisserait le prix d'achat de ces dentrifices pour les consommateurs.

L'A.D.C. désire produire les explications suivantes à ses membres:

1) L'Association, étant un organisme de santé, n'a aucun intérêt dans la direction d'entreprises commerciales fabriquant des dentifrices.

2) Peu importe les opinions scientifiques au sujet de la valeur des dentrifices actuellement sur le marché, il faut admettre que les dits dentrifices constituent un élément important dans la santé dentaire du public.

3) Le coût de ces dentrifices influencent leur usage au sein des populations, qui ont été instruites de coordonner le soin de leur bouche avec l'emploi d'un dentrifice.

4) Nous sommes informés que le Canada est le seul pays, qui inclut dans la liste des produits de toilette taxables, les dentifrices.

Les lignes suivantes sont tirées d'une réponse du Ministère, à qui des représentations ont été faites, le 18 novembre 1948:

"Soyez assurés que lors de la discussion des projets de taxation en rapport avec le nouveau budget, vos remarques seront étudiées avec grande attention."

Reconnaissance du Département des Affaires des Vétérans

L'D.C. a reçu la lettre suivante du Dr L. A. Kilburn, directeur des Services Dentaires du Département des Affaires des Vétérans:

"Permettez-moi de profiter de cette circonstance pour vous exprimer l'appréciation de cet organisme pour la collaboration excellente, que nous ont donné les dentistes du Canada, dans le traitement des licenciés des forces armées.

Le programme de réhabilitation des membres du personnel des armées canadiennes comportait une grosse part de traitements dentaires, à un moment où la profession était surchargée d'ouvrage avec les populations civiles. Les chiffres en notre possession montrent d'une façon éloquente de quelle façon les dentistes canadiens ont accompli cette besogne supplémentaire. Au 30 septembre 1948, date où

cessait officiellement les autorisations de traitements dentaires pour les licenciés, 662,826 patients ont été référés au dentistes de ce pays; à cette même date seulement, 3,414 cas restaient incomplétés.

A peu près 98% des membres de la profession ont participé à ces traitements et, de ce nombre, bien peu ont cherché à tirer parti du patient ou du Département. Et c'est à la grande majorité que je dis: "Merçi pour votre collaboration merveilleuse à solutionner ce problème." Comme il m'est impossible de remercier chaque dentiste individuellement, je vous fais parvenir cette lettre en espérant que vous trouverez un moyen de transmettre ce message.

Sincèrement,

(signé) L. A. KILBURN, *D.D.S.*
Directeur des Services Dentaires."

Nécrologie

Le docteur J. A. Aimé Lantier, doyen des chirurgiens-dentistes de la province de Québec, est décédé dans son domicile, à Québec, le 23 novembre 1948, à l'âge de 87 ans.

Né à Montréal, le ler janvier 1861, il était le fils de Jean Olivier Lantier et de Julienne Bonneville. Elève du collège de Montréal, il termina son cours classique au séminaire des Trois-Rivières.

A vingt ans, avant son départ du petit séminaire, il lui fallut choisir une carrière et opta pour la chirurgie dentaire; sa décision prise, il se prépara à sa licence, passée en 1884, avec les dentistes, très réputés à cette époque, les docteurs C. C. F. Trestler et S. Globensky. Reçu dentiste, il alla se perfectionner à New York, d'où il revint, l'année suivante, ouvrir un cabinet aux Trois-Rivières.

Ses confrères, à cause de son activité, ne tardèrent pas à lui donner des marques de confiance et, aux élections de l'Association des Chirurgiens-Dentistes, tenues au McGill Medical College, en 1889, ils le nommèrent, avec M. S. J. Andres, scrutateur. En novembre 1891, lors de la fondation de la Société d'Odontologie du Québec, il fut élu vice-président. A l'Hôtel Balmoral, où se tenait la réunion, il prononca en anglais un confèrence intitulée "Reflex Neuralgia of Dental Origin" que le rédacteur de la revue, Dominion Dental Journal, louangea avec chaleur, dans la livraison de janvier 1892.

Quelques années plus tard, on le retrouve, exercant son art à Québec, où les citoyens de cette ville l'élirent échevin des quartier Champlain et du Palais durant neuf termes; pendant ses mandats il fut président des finances et leader du conseil. En 1922, il démissionna et accepta le poste de directeur de la clinique dentaire, que la ville ouvrait pour le traitement des enfants.

De 1911 à 1914, il fut président du Collège des Chirurgiens-Dentistes de la province de Québec et, le 15 mai 1933, à son jubilé professionnel, l'université de Montréal lui octroya un doctorat en chirurgie dentaire (honoris causa).

Il se maria en 1884 avec Mademoiselle Loretta Dunn, qui mourut en 1915, et se remaria, en 1930, à Madame Alfred Bettesworth, née Jeanne Rambeau.

Il est le père de notre confrère, le docteur Jacques Lantier, que nous prions d'accepter, pour lui et sa famille, nos sincères condoléances.

Paul-E. Poitras, D.D.S.

Cours de perfectionnement à l'Université de Montréal

Des cours post-scolaires sont offerts aux praticiens à la faculté de Chirurgie Dentaire de l'Université de Montréal, durant le mois de février:

Chirurgie et Anesthésie: les 7, 8, 10, 15, 16, 17 (matinées seulement).

Diagnostic: les 8, 15, 22, ler mars (matinées seulement).

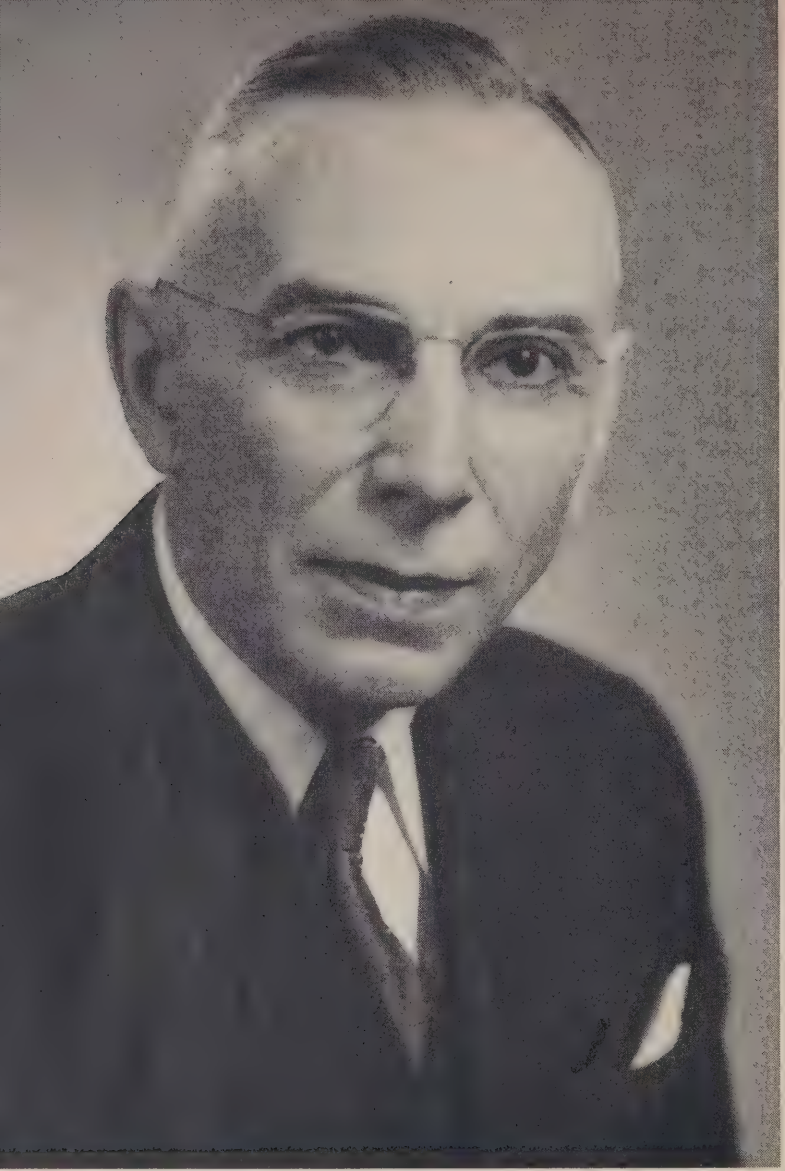
Prothèse: du 7 au 12 février (une semaine complète).

Pour tous les renseignements, on s'adresse au doyen, 2900 Boul. Mont-Royal, Montréal.

Photo by J. S. Bricker, D.D.S., Vancouver, B.C.

Chief of the Capelano's—John George

He who helps a child helps humanity with an immediateness which no other help given to human creature in any other stage of human life can possibly give again.—PHILLIPS BROOKS.



NORMAN C. CARMICHAEL, D.D.S., L.D.S.
Winnipeg, Manitoba

Immediate Past President of the Manitoba Dental Association.
Graduate Royal College of Dental Surgeons of Ontario, 1910.
Past President Pine Ridge Golf Club.
Past President Manitoba Golf Association.
Member, St. Charles Country Club, Manitoba Club, Scottish Rite and Shrine.

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Dental Studies and Nutritional Findings in the James Bay Indian†

by W. G. McINTOSH, D.D.S., Toronto, Ontario

IN a previous study[1] of the Canadian Bush Indian evidences of marked malnutrition were found. Among the outstanding observations were those on the dental tissues which were reported to be in very poor condition. The examination in this instance was conducted by physicians and from a dental standpoint was essentially superficial.

The present investigation of the Canadian Bush Indian was planned to include not only a medical examination from the standpoint of their health and development, nutritional state, prevalence of tubercular infection and their housing and sanitation, but also a detailed dental examination.

The study was planned by the "National Committee on Community Health Survey" under the chairmanship of Dr. Percy Vivian. The following personnel took part in the overall study: six physicians, a dentist, an x-ray technician, a photographer and three anthropologists.* The present report is limited to the dental aspects of the study which were carried out in August 1947.

Area Selected For The Study

The James Bay region was chosen as the area for study on account of its accessibility.

James Bay is the southern extension of Hudson Bay, sometimes known as Canadian Sea, which is the second largest sea on earth, being 1300 miles long and 600 miles wide. It is exceeded in size only by the Mediterranean Sea. Hudson Bay was discovered in 1610 by Henry Hudson, who set out from England in the barque "Discovery" with a crew of 20 men. After proceeding through the Hudson Straits, he entered Hudson Bay believing he had discovered the Northwest Passage to the Pacific Ocean. It was late autumn when they reached the southern extremity, now known as James Bay, and realized they were not on the Pacific but on an inland sea. They wintered in James Bay and in the spring started to return to England. Unfortunately for Hudson, his crew mutinied and cast him adrift in a small boat with 7 loyal members of his crew. The "Discovery", with Hudson's charts, returned to England.

In 1662, the Frenchmen Groseilliers and Radisson proceeded up the Great Lakes and from the northern shore of Lake Superior struck north until they reached James Bay at the Moose River. There they found evidences of an old house which must have been built by Hudson 50 years before. The two Frenchmen returned to the St. Lawrence and proceeded first to France, where no one showed any interest in their story, then

*The personnel included Dr. P. E. Moore, Superintendent, Indian Health Services, Department of National Health and Welfare, Dr. W. H. Sebrell of the United States Public Health Service, Dr. R. P. Vivian, Director, and Dr. Charles MacMillan, Associate Director of the Department of Health and Social Medicine, McGill University.

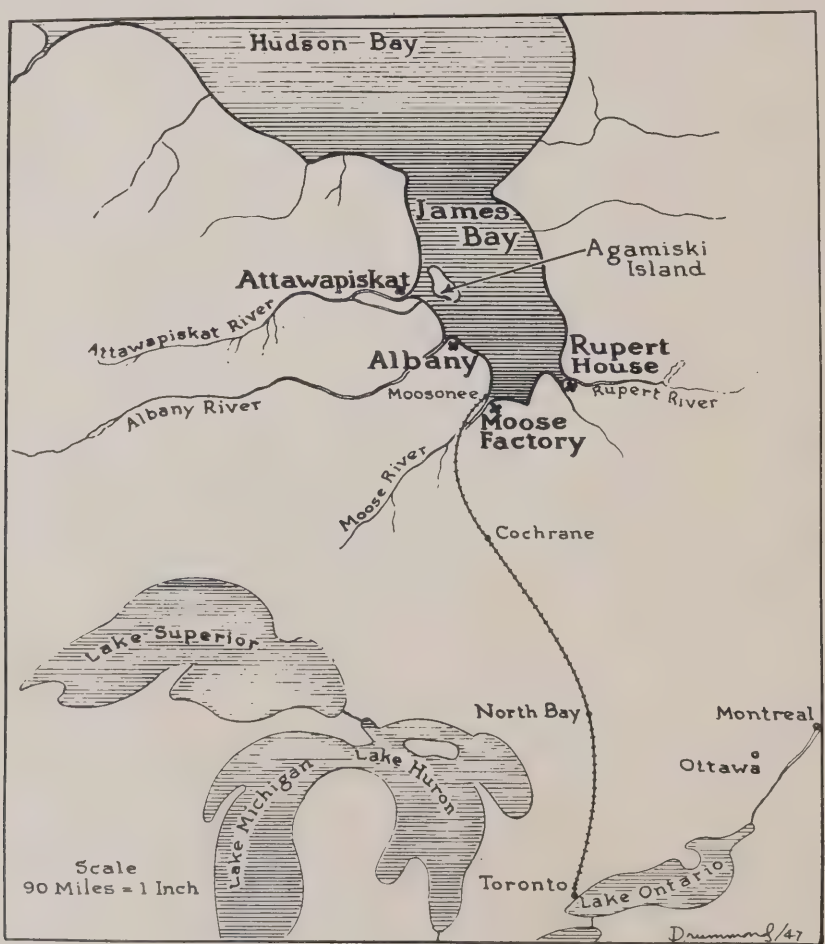
Dr. Elizabeth Chant Robertson and Dr. F. F. Tisdall of the Hospital for Sick Children, Toronto.

Professor Gordon Brown, Associate Professor of Anthropology, University of Toronto, and his associates Mr. J. J. Honigmann and Mr. A. J. Kerr, Mr. Gordon Stockley, x-ray technician of the Tuberculosis Prevention Division of the Department of Health of the Province of Ontario, Mr. Michael Sym, photographer.

†This study was made possible through the financial support (recommended by the Special Joint Committee of the Senate and the House of Commons on Indian Affairs) of the Departments of National Health and Welfare and Mines and Resources, and by a grant made by the Life Insurance Companies in Canada.

to England. They were astonished when the English showed them Hudson's charts of Hudson bay. The English were interested and, in 1668, two boats set out. One ship became disabled but the other, called "The Nonsuch," proceeded through Hudson Straits and Hudson Bay south to Moose River, where they found the remains of the Frenchmen's camp of six years previous. The boat then wintered at a place they named Fort Charles, which is now Rupert's House. Two years later, on May 2, 1670, England's Company of Adventurers, now known as the Hudson's Bay Company, was given a charter that made them owners of a large portion of the New World.

The Indians of the James Bay area are typical of the Canadian Bush Indians. With the exception of the Moose Factory Band, they are as isolated from outside influences as the more remote bands. The Indians congregate in various bands and spend nine to eleven months each year looking after their trap-lines in the interior. In the summer months, they come down to the trading posts of the Hudson's Bay Company situated on James Bay to trade their furs for food, clothing and other articles of interest to them. The supplies for the area, which were formerly brought in by boat through Hudson Straits, are now distributed by small boats from Moosonee, which is the terminus of the Ontario Northland Railway, 500 miles directly north of



ILLUS. 1.
Map of James Bay area.

Toronto. The number of James Bay Indians is approximately 3000.

Two bands were chosen for intensive study, the Attawapiskat Band at the western and the Rupert's House Band at the southeastern sections of James Bay. Arrangements were made to have an anthropologist live with each of these bands for approximately one year.

The party was transported by rail to Moosonee, at the south end of James Bay, and then by water and air to the Attawapiskat Band and to the Rupert's House Band *(Illus. 1)*. Due to adverse weather conditions, it was necessary to turn into the Albany River on the west coast, and the Moose River on the south coast, which afforded an opportunity to examine members of the Albany and Moose Factory Bands in addition to the Attawapiskat and Rupert's House Bands as originally planned.

In addition to the dental examination, physical measurements which included height and weight, and a full plate chest x-ray were secured for each subject. An appraisal was also made of the general condition, alertness, both mental and physical, the presence of old or active tuberculosis of the cervical glands, enlarged thyroid, bony deformities possibly due to old rickets, and changes in the hair, skin, eyes, lips and tongue which can result from malnutrition. Details of food supply from all possible sources were investigated and an analysis made.

Number Examined and Procedures Followed

In *chart* 1 of the appendix is set out the number who received a dental examination from each band. At Attawapiskat out of a total of 468, 189 or 40% were examined, and at Rupert's House out of a total of 375, 141 or 38% of the band were examined. The total number to receive a dental examination including those from Albany and Moose Factory was 491.

Due to the fact that records of the food consumed by the different bands for a period immediately preceding the investigation could only be obtained from the Attawapiskat and Rupert's House Bands, the observations reported here are limited to those two bands.

The procedure followed was to obtain with the aid of an interpreter, the name and age of each subject. He or she was then given a number for identification.

The dental examination included a survey of both hard and soft tissues. In order to see as many subjects as possible, rather than examine every mouth completely, the lower right quadrant only was charted in detail.

CHART 1

NUMBER OF INDIANS EXAMINED, THEIR AGE AND SEX

Band and total population	Total number to receive Dental Examination	Sex	Years of Age			
			2-12	13-25	26-45	46-
Attawapiskat 468	189	male	23	16	24	21
		female	29	26	33	17
Rupert's House 375	141	male	19	25	14	16
		female	15	23	19	10
Albany	104	male	15	17	18	9
		female	6	21	10	8
Moose Factory	57	male	8	6	5	10
		female	8	10	6	4

CHART 2

DENTAL EXAMINATION

Nomad

No..... Name..... Age..... Village..... Post Native

Using the symbols record the following—

X	Missing Teeth
⌒	Unerupted Teeth
C	Cavities
F	Fillings
A	Abrasions
/	Open Contacts
M1, 2 or 3	Mobility
mms.	Pockets—4 or more
R1, 2 etc.	Recessions
B	Open Bifurcations
S	Smears

$$\frac{8\,7\,6\,5\,4\,3\,2\,1}{8\,7\,6\,5\,4\,3\,2\,1} \;\Big|\; \frac{1\,2\,3\,4\,5\,6\,7\,8}{1\,2\,3\,4\,5\,6\,7\,8}$$

Tooth Arrangement:..... Normal Crowding

Gingivae:..... Normal Simple G Hyperplastic Necrotic

Continuous Eruption:.....

Elevation:.....

Occlusal Wear:..... Grades 1 2 3

Overjet:.....

Overbite:.....

Other specific Oral Disease:....

Separation in Rest Position:...

Calculus:..... Supra Sca. Med. Abu. Sub Sca. Med. Abu.

Toothbrush:..... Yes No

Remarks.....

Tooth arrangement, unerupted teeth, extractions, cavities, dental restorations, tooth abrasion, tooth mobility, gingivitis gingival recessions, gingival and periodontal pockets, alveolar abscesses, overbite and overjet relationships and calculus were all recorded on a prepared chart (*chart* 2). An attempt was made to determine the vertical separation between the upper and lower arches in rest position, but even with the aid of an interpreter, no satisfactory measurements could be obtained. Full mouth dental radiograms were taken for eight subjects with a portable chest x-ray apparatus. Contact bacterial smears were secured from gingival pockets in approximately 50 mouths. Coloured photographs were taken of the anterior teeth and gingivae of a large number of the subjects.

Observations

Caries Experience.

The percentage of Indians examined at Attawapiskat and Rupert's House with no decayed, missing or filled teeth is shown in *chart* 3. The immunity is considerably higher at Attawapiskat than at Rupert's House in all age groups.

The average number of decayed, missing or filled teeth (D.M.F.) per Indian is shown in *Chart* 4. As practically no dental restorations were

CHART 3

PERCENTAGE OF INDIANS WITH NO MISSING, DECAYED OR FILLED TEETH AT ATTAWAPISKAT AND RUPERT'S HOUSE

Age-Years	Sex	Attawapiskat Band	Rupert's House Band
2-12	Male	48%	0%
	Female	62%	20%
13-25	Male	50%	24%
	Female	50%	9%
26-45	Male	37%	14%
	Female	21%	0%
46-	Male	43%	12%
	Female	18%	0%

Note: An unerupted tooth was not considered to be Missing.

CHART 4

AVERAGE NUMBER OF DECAYED, MISSING OR FILLED TEETH PER INDIAN EXAMINED

Age-years	Sex	Attawapiskat Band	Rupert's House Band
2-12	Male	3.6	6.8
	Female	2.4	6.8
13-25	Male	2.8	4.8
	Female	3.6	8.4
26-45	Male	5.2	6.4
	Female	6.8	14.0
46-	Male	4.8	11.2
	Female	9.6	20.4

present, these are essentially records of the number of decayed and missing teeth. It should be kept in mind that teeth may be lost from causes other than dental caries. Therefore the D.M.F. count can be regarded only as a rough index of the total caries experience. It was calculated for each Indian by multiplying the count in the lower right quadrant by four. The rate at Rupert's House is two to three times that at Attawapiskat and in nearly every instance is higher in the females than in the males.

Cervical Abrasion.

Although the susceptibility to caries was moderate, practically no evidence of tooth erosion or abrasion was observed in the cervical areas. Invariably this area of the tooth was covered either by a soft, sticky, greasy film, or by a calcareous deposit. When the film was wiped or scaled off, a hard polished tooth surface was exposed. The absence of cervical abrasions plus the fact that the Indians do not use tooth brushes suggests that the tooth brush may be the main cause of the abrasion. However the hard highly polished tooth surfaces that are maintained even under the sticky films seem to indicate the presence of additional protective factors.

CHART 5

PREVALENCE OF ALVEOLAR ABSCESS

Age-years	Attawapiskat	Rupert's House
2-12	1.5%	40.0%
13-25	3.0%	23.0%
26-45	14.5%	61.0%
46-	36.5%	62.0%

Dental Fluorosis.

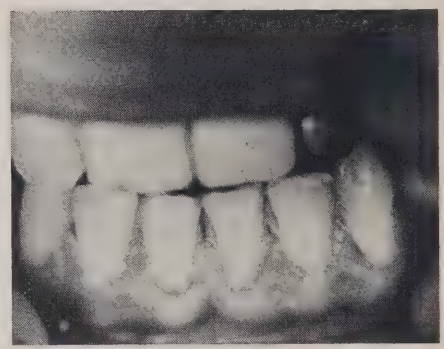
No evidence of dental fluorosis was recognized, although in most mouths the teeth were so badly stained that minor mottling could readily have been overlooked. The water used by the Indians comes from the rivers or melted ice and snow and contains practically no fluorine. An analysis of the water from the river gave .11 parts per million of fluorine at Attawapiskat and .13 at Rupert's House. The only possible source of fluorine in the diet therefore comes from the small bones of the animals and fowl eaten. According to the anthropologists it is common practice for the Indians to chew and suck the soft ends of the leg bones particularly of the geese, ducks and ptarmigan. The bones are not swallowed.

Abscess Formation.

The presence of alveolar abscesses as shown by swelling of the mucosa over the alveolar process with fistula formation and suppuration was noted and the results recorded in *Chart* 5. Like the caries incidence, abscesses were found with much greater frequency at Rupert's House than at Attawapiskat. It was not uncommon to find individuals, particularly in the older age groups, with as many as ten suppurating abscesses and the teeth broken down by caries and trauma, until only the roots remained.

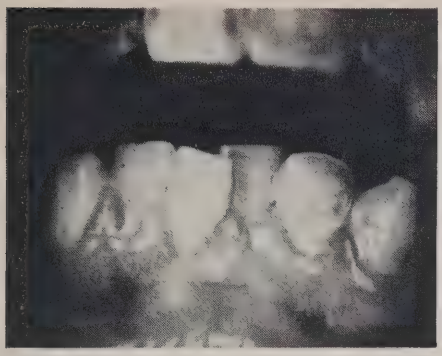
Gingivitis.

Gingivitis, redness and swelling of the gingivae, was very prevalent except in the two to twelve year age group. For charting purposes the gingivitis encountered was recorded as Grade 1, 2, or 3. Grade 1 included minor changes of redness and swelling of the gingival margins or tips of the papillae or both (*Illus.* 2). In Grade 2 the redness and swelling had increased until a distinct red shiny swollen band of gingival tissue could be seen around the necks of the teeth. This band was often a dark red colour and usually well demarcated from the adjoining normal tissue, (*Illus.* 3). More severe degrees of envolvement with marked



ILLUS. 2.
Grade 1. Gingivitis.

ILLUS. 3.
Grade 2, Gingivitis.



ILLUS. 4.
Grade 3, Gingivitis.

redness and swelling and extension of the inflammatory process over the alveolar process were designated as Grade 3 (*Illus.* 4). The frequency with which these changes were encountered in different age groups at Attawapiskat and Rupert's House is recorded in *Chart* 6. Both the frequency and severity of the inflammatory changes were greater at Rupert's House than at Attawapiskat. It is particularly striking that Grade 3 gingivitis in the oldest age group occurred nearly ten times as frequently at Rupert's House as at Attawapiskat.

The gingivitis was usually associated with large supra- and subgingival calcular deposits which in many cases covered as much as three-quarters of the exposed crown surfaces of the teeth. Teeth out of occlusion often had the pits and fissures of the occlusal surfaces completely obliterated by these deposits.

Gingival hyperplasia without inflammation was so seldom observed (17 cases out of 491 mouths examined) that it was not considered in the tables.

The most striking observation was the marked tendency for the gingival inflammation to be very definitely limited to the marginal tissues in spite of such severe local irritants as the heavy calcular deposits, retention of food and mouth breathing.

Pigmentation of the gingivae, a characteristic of dark skinned races, was common and often very marked.

Gingival recessions were seldom encountered under any circumstances.

Periodontitis.

Changes in the periodontal membranes and supporting bone were found frequently in all age groups and at all Bands. It was determined from carefully probing the pockets and testing

CHART 6

PREVALENCE OF GINGIVITIS AT ATTAWAPISKAT AND RUPERT'S HOUSE

Band	Grade of Gingivitis	Age in Years			
		2-12	13-25	26-45	46-
Number examined		48	40	53	38
Attawapiskat	None	77.1%	22.5%	7.5%	5.2%
	1	20.8%	57.5%	60.5%	66.0%
	2	2.0%	15.0%	24.5%	23.6%
	3	0	5.0%	7.5%	5.2%
Number examined		34	47	33	26
Rupert's House	None	38.2%	8.5%	0	0
	1	55.8%	57.4%	30.3%	7.7%
	2	5.8%	27.6%	39.3%	42.3%
	3	0	6.3%	30.3%	50.0%

Note: If the lower right quadrant was edentulous or nearly so, the gingival tissues were not graded. Those with hyperplastic gingivitis are also not included in this table.

the mobility for each tooth in the lower right quadrant that periodontitis simplex was more prevalent than the complex form. Complex periodontitis when present was associated with gingival inflammation. In this respect it did not conform to the pattern described by Box [2] as typical of the true necrotic type of periodontitis in which the mouth is clean, exhibiting little or no gingival inflammation.

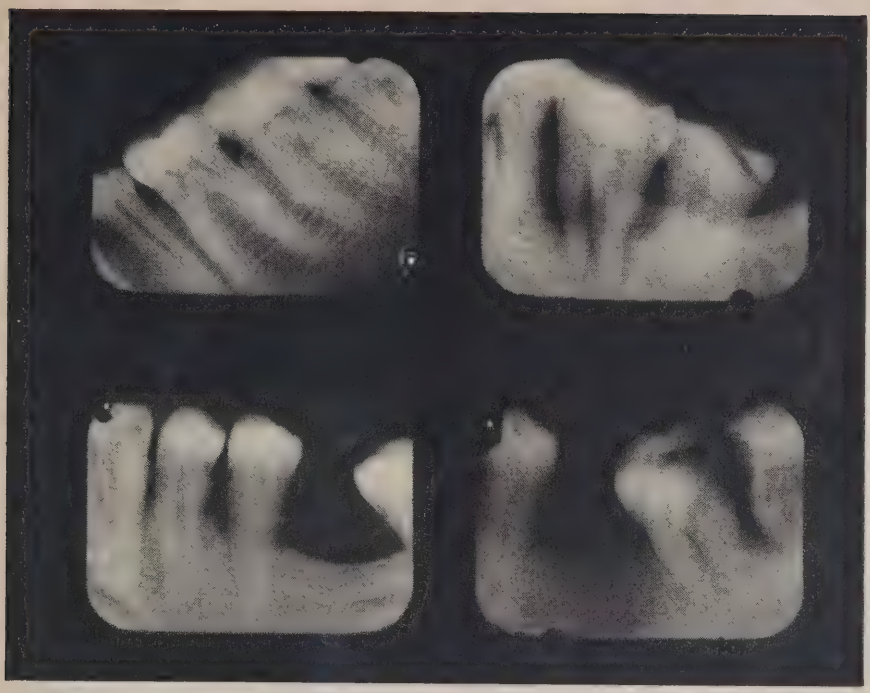
ILLUS. 5.
Extensive destruction of the supporting tissues.

Only seldom was evidence seen of cases where Indians could remove their own teeth as a result of extensive destruction of the supporting tissues (*Illus.* 5). A medical group conducting a survey of nutrition in Newfoundland [3] reported it commonplace for young adults there, to be able to remove their own teeth by pulling them out with their thumb and forefinger.

Radiographic Observations.

The dental radiograms taken for eight subjects from Attawapiskat indicate that the roots of the teeth vary in size and shape to about the same extent as do the roots of the teeth of our white population. The individuals radiographed varied in age from 17 to 72 years and all exhibited a marked recession of the pulp chambers and root canals. In several teeth all but the apical half of the root appeared com-

ILLUS. 6 A
Typical radiograms.



ILLUS. 6 B
Typical radiograms.

pletely calcified. From a study of the relatively few radiograms procured, this recession of the pulp chamber occurred more frequently and was more severe in the anterior teeth than in the posteriors.

The pattern of destruction of the supporting bone was generally horizontal with an occasional area of vertical destruction that often approached the apices of the affected teeth. If the amount of bone destruction, the subject's age and the severity of local irritants are examined together, one gets the impression that the rate of destruction is relatively slow. Typical radiograms are shown in (*Illus.* 6).

Arch Form.

The dental arches of the Indians were generally broad with thick alveolar processes. Crowding of the anterior teeth was recorded in only a very small percentage of those examined.

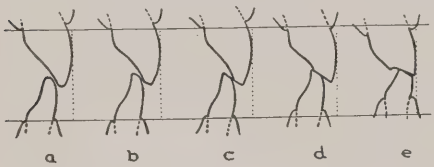
Occlusal Wear.

The pattern of occlusal wear observed in the Indians was unusual. The anterior teeth almost invariably showed a greater degree of wear than

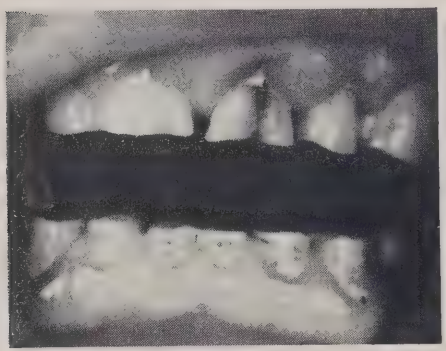
ILLUS. 7.
No wear on posteriors—marked wear on anteriors.

did the posteriors in the same mouth (*Illus.* 7).

The overbite was two millimeters or less in approximately 80% of all Indians examined and a large number had end to end relationships which appeared to develop in the sequence illustrated in the sketches in (*Illus.* 8).



ILLUS. 8.
Wear pattern on anterior teeth.



ILLUS. 9.
Extensive wear accompanied by elevation.

The final incisal relationship, in most cases, was not two horizontal surfaces, but two parallel planes with downward inclination. See sketch.

Many cases were seen where the anterior teeth were worn until only two or three millimeters of the crowns remained, (*Illus.* 9). As a rule no gingival recession had occurred around these teeth. The epithelial attachments were still at or near the cemento-enamel junctions. In spite of this severe loss of tooth structure the anterior teeth still contacted in centric relation and from rough measurements the vertical dimension did not appear to be greatly altered. This suggests that the loss of vertical dimension through occlusal wear was compensated for in part at least, by elevation of tooth, alveolar process and gingivae rather than by exfoliation of the teeth.

Observations on wear patterns are incomplete without some mention of the eating habits. Meat, which is one of the mainstays of the Indian diet is boiled and served in large chunks. As forks and plates are not in common use the Indian eats from hand to mouth and has to bite off smaller portions for mastication. The biting-off is accomplished by a series of incisive motions which also partly masticate the food and by so doing reduce the amount of function required by the posterior teeth. This heavy function on the anterior teeth probably accounts for the extensive wear so frequently seen in this area.

The Indians, particularly the women, also used the anterior teeth for softening and moistening sinew thread that they employed for sewing. They draw long strands of the hard thread between upper and lower anterior teeth. This practice often resulted in the formation of deep notches in the teeth (*Illus.* 10).

ILLUS. 10.
Notch in upper central

No particular pathosis, other than extreme tooth abrasion could be associated with either of these strenuous functions.

Bacterial Smears.

An attempt was made to have a representative group of smears from all age groups and from all depths of

Fig. 2.—*Jano II* which transported the members of the expedition by water.

Fig. 3.—"Norseman"—plane which transported the members of the expedition by air.

Fig. 4.—Indian tent at Rupert's House with family standing outside.

Fig. 5.—Mother and 3 children cooking outside tent at Attawapiskat.

Fig. 6.—Discharging tubercular glands —female, aged 31.

Fig. 7.—Folliculosis of the skin of arm—female, aged 17. Note resemblance to "goose flesh".

Fig. 8.—Xerosis of skin of leg—female, aged 59. Dryness with thinning and crinkling.

Fig. 9.—Cheilosis—female, aged 14. Note swelling, redness and vertical striæ of lips.

Fig 10.—Angular stomatitis—female, aged 50. Note reddened moist fissure at angle of mouth extending on to skin of face.

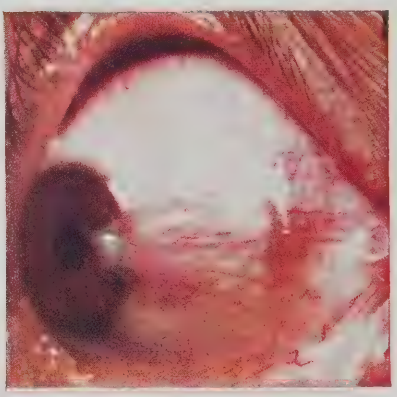


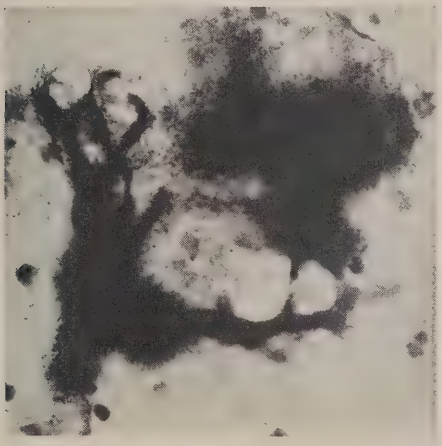
Fig. 11.—Thickening of conjunctiva and pterygium extending well across the cornea—male, aged 46.

Fig. 12.—Grade 3 gingivitis with redness, swelling and retraction of gingival tissue—male, aged 36.

Fig. 13.—Dental caries—male, aged 33.

pockets. The smears were fixed with .01% picric acid at the time they were taken and later stained with Giemsa stain.

The smears showed a great abundance of the common types of oral flora, particularly fusiform bacilli, spirochaetes and cocci forms. In addition various complex forms of fungus-like organisms described by Beust[4] and recently associated by Box[5] with a necrotic type of periodontal destruction, were seen in all but seven smears. (*Illus.* 11).



ILLUS. 11.

Large complex organism formations, typical of the Indian smears. *Note*—This photo was loaned to the writer by Dr. H. K. Box.

While nearly all the smears contained large numbers of the fusiform bacilli and spirochaetes generally associated with necrotic gingivitis[6] or trench mouth, no evidence was seen clinically of either acute or chronic forms of this disease.

General Medical and Nutritional Findings.

It was the impression of all observers that the Indians examined were short and not well muscled. This impression was borne out by the measurements taken, the details of which are shown in the medical report[7]. Equally striking was the slowness with which they moved and their apparent apathy. The children were much more docile than white children. On comparing the Attawapiskat and Rupert's House bands, the latter was the more active physically and displayed more initiative.

During the medical examination particular attention was paid to the presence of abnormal conditions involving the skin, lips, eyes and tongue, conditions which can be associated with malnutrition. Brief comments on the lip and tongue observations follow, but for further detail on these and other conditions the reader is again referred to the medical report[7].

Lips.

Cheilosis which is characterized by swelling, redness, scabbing and fissuring of the mucous membranes of the lips has been reported in individuals suffering from a lack of riboflavin[8]. These signs were seen to some degree in the majority of Indians examined (*Fig.* 9 of coloured prints) and were found with approximately equal frequency in both sexes and at all ages. They were seen more frequently at Rupert's House than at Attawapiskat.

Angular stomatitis, fissures at the angles of the mouth along with an inflammatory reaction may also be associated with a lack of riboflavin, but, like cheilosis, there are other aetiological factors. When this condition heals, scars remain. This sign was seen with approximately equal frequency in both sexes but it occurred with much greater frequency at Rupert's House than at Attawapiskat (*Fig.* 10 of coloured prints). Less than ½% of those examined at Attawapiskat had active lesions and about 3½% showed scars, while 10% at Rupert's House had active lesions and about 30% showed scars.

Tongue.

It is well known that a lack of niacin will produce the fiery red tongue of pellagra, with atrophy of the papillae and the development of fissures. However other factors may also be involved in the production of these

changes. The tongue changes were all relatively mild and were seen with approximately the same frequency in both sexes and in both Bands.

Food Supply.

The food supply for both Bands of Indians came from three sources, trading, from hunting and fishing and from supplies of fish liver oil and vitamized biscuits sent in by the Indian Health Services and Indian Affairs Branch of the government. A complete analysis of the Indian diet is given in the medical report [7]. The total calories and total essential nutrients were calculated and are recorded in *Chart* 7.

were susceptible. The Attawapiskat children showed a slightly greater immunity than the white children, while those at Rupert's House were more susceptible.

It was not uncommon to find little Indian children, 3, 4 and 5 years of age with most of the deciduous teeth decayed and broken until only roots remained. From questioning it was learned that many of these children were brought up on sweetened condensed milk and also that the crying child was habitually quieted by giving him hard candies to suck.

Arnold, Dean and Singleton [10] found an average D.M.F. count of 9.9 in a

CHART 7
TOTAL NUTRIENTS FROM ALL SOURCES
AMOUNTS PER PERSON PER DAY

Nutrient	Attawapiskat Band	Rupert's House Band	Weighted Recommended Allowance (Food & Nutrition Board, N.R.C., 1945)
Calories	2,546	3,103	2,790 ‡
Protein—gms.	114	110	64
Calcium—mgs.	425	363	970
Iron—mgs.	17	20	11
Vitamin A—I.U.	7,184	2,280	4,300
Thiamine—mgs.	1.3	1.5	1.3
Riboflavin—mgs.	1.5	1.7	1.85
Niacin—mgs	16	17	13
Ascorbic Acid—mgs.	12	14	68

‡ Men allowed 4,500 calories daily for 9 mos. and 3,000 daily for 3 mos; Women 3,000 daily for 9 mos. and 2,500 daily for 3 mos.

The Recommended Allowances vary with the sex and age of the individual. These amounts would provide the Recommended Allowances for the men, women and children of the two bands.

Discussion

The susceptibility to caries in the Indian children can be compared with that of two groups of white children in Canada. Hanley and Pett [9] report that approximately 70% of the children in British Columbia and 48% of those in Saskatchewan up to and including those who were 12 years of age had caries of some degree. In a comparable age group, 52% of the boys and 38% of the girls at Attawapiskat had caries and 100% of the boys and 80% of the girls at Rupert's House

group of cadets whose average age was 19.6 years. This figure is two to four times the average calculated from the Indian males in the 13 to 25 age group.

It thus appears that the deciduous teeth of the Indians are equally as susceptible to caries as are those of white children in Canada, but that the second dentition up to 25 years of age at least, is considerably more immune than in a comparable group of whites.

Klatsky [11] suggests that the well developed jaw bones and muscles and the relatively healthy teeth of the primi-

tives is not the result of good nutrition. "They enjoy these benefits in spite of inadequate nutrition. The texture of food consumed by primitives is rough, bulky and resistant—qualities which tend to stimulate the masticatory apparatus to great activity and proper function."

The percentage of Indians immune to dental caries coincides with that reported by Dr. P. W.Arkle following a survey of the same Indian bands in 1942 [12].

Many factors both local and systemic are involved in the production of gingivitis. From a systemic standpoint there is considerable evidence that a deficiency of ascorbic acid can be an aetiologic factor. In certain countries such as Newfoundland[13] and Africa[14], where the average daily intake of ascorbic acid is low, gingivitis is almost universally present, whereas in other areas such as the British West Indies[15] where the ascorbic acid intake is high, although the diet is deficient in other nutrients, gingivitis is seldom encountered. Also when patients with a mild to moderate degree of gingivitis are treated locally to clear up the redness, swelling and tenderness of the gums, and then placed on a diet supplying only 8 to 10 milligrams of ascorbic acid per day, the gingivitis recurs much more frequently than when food is consumed supplying 75 milligrams of ascorbic acid daily[16].

The ascorbic acid intake for the Indians was low (calculated to be approximately 14 milligrams per day) and probably, in addition to the local irritants, contributes to the high incidence of gingivitis.

Mouth breathing was also undoubtedly a factor in producing the gingival inflammation. The vigorous out-of-doors activities of the Indians and the smoky atmosphere of their tents both favour a mouth breathing habit.

It is interesting to note that the complex forms of fungus-like organisms were found in so many of the smears, especially as the smears were taken from pockets of various depths and in all types of mouths. Box in his investigations has found these organism formations generally associated with a necrotic type of tissue destruction. In the Indian smears they were nearly always present and not necessarily associated with the clinical symptoms of true necrotic periodontitis. Further studies are indicated to determine the conditions that favour the growth of these organisms in the mouths of the Indians and also to determine the factors that seem to give the majority of Indians a high resistance to the rapid necrotic type of destruction of the periodontal tissues.

The complete absence of clinical evidence (destruction of tips of interdental papillae with pseudomembrane formation) of necrotic gingivitis (Trench Mouth) is striking. It has been reported many times that the fusiform bacillus and Vincent's spirochaete were the organisms that cause this disease. Poor nutrition, particularly deficiencies of the vitamins has also been said to be the chief predisposing factor[17]. In the Indians, the organisms were present in very large numbers in almost every mouth, and moreover, the Indians were considered to be malnourished especially with regard to the vitamins, and still there was no evidence of necrotic gingivitis. Dr. Rose[18] recently reported a similar observation among a group of people living on the islands between Vancouver Island and the mainland where living conditions in many respects would be comparable to those of the Indians.

Caries, gingivitis and cheilosis were all more prevalent at Rupert's House than at Attawapiskat although the total calorie intake was higher at Rupert's House where the benefits of a beaver conservation plan has been influencing the diets since 1940. It should be pointed out in considering this data, that at Rupert's House between 1930 and 1940 the Indians were literally starved. After 1940 the beaver conservation program changed

their diets considerably, both by the actual meat provided and also by increasing their incomes. It was calculated that the consumption of pure sugar was 2.9 ounces per person per day at Rupert's House and 3.3 ounces at Attawapiskat, while the daily consumption of candy per person was three times greater at Rupert's House than at Attawapiskat, (0.34 ounce per person per day compared to 0.12 ounce at Attawapiskat).

SUMMARY

1. Medical, dental, nutritional and anthropological studies have been conducted on two bands of Northern Ontario Bush Indians.
2. The deciduous teeth were found to be very susceptible to caries, while the second dentition was relatively immune. Both dentitions were immune to cervical abrasion and erosion. No evidence of dental fluorosis was encountered.
3. Marginal gingivitis was common and was found associated with large calcular deposits on the teeth. Gingival recessions were seldom seen.
4. Periodontitis was encountered; the simplex type was more prevalent than the complex. Both were found associated with gingival inflammation.
5. Radiographic evidence disclosed that marked recession of the pulp chambers had occurred in many teeth—more frequently in the anterior than in the posterior teeth.
6. The dental arches of the Indians were broad with thick alveolar processes.
7. The pattern of occlusal wear was unusual—the anterior teeth showed a greater degree of wear than the posteriors. The anterior teeth were used in place of the knife and fork for biting-off coarse food and also for softening a sinew thread used for sewing. The overbite was 2 millimeters or less in most mouths and many exhibited an end to end relationship of the anterior teeth.
8. Elevation of the teeth, supporting bone and gingivae had occurred in many mouths to help compensate for the loss of vertical dimension created by occlusal wear. Exfoliation of the teeth was rarely seen.
9. 50 contact bacterial smears were secured from pockets of various depths in all types of mouths. The fungus-like organisms associated with necrotic periodontitis were found in 43 of these smears. Although the fusiform bacilli and Vincent's spirochaetes could be seen in large numbers in practically every smear, no clinical evidence of necrotic gingivitis or Trench Mouth was observed.
10. The Indians were small of stature and apathetic.
11. Changes that may be associated with malnutrition were seen in the lips and tongue and gingivae.
12. A complete dietary analysis and the details of the medical examination and the anthropological findings are reported elsewhere.

Acknowledgments:

The writer wishes to acknowledge the help he received in the preparation of this material from each of the members of the study group, particularly that received from Dr. F. F. Tisdall of the Hospital for Sick Children, Toronto.

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REFERENCES

1. Moore, P. E., Kruse, H.D., Tisdall, F. F. and Corrigan, R.S.C.: Medical Survey of Nutrition among the Northern Manitoba Indians, Canadian Medical Association Journal, 54:223, 1946.
2. Box, H. K.: Concerning the Pathogenesis of Periodontal Disease The Journal of Periodontology 19:11, 1948.
3. Adamson, J. D., Jolliffe, N., Kruse, H. D., Lowry, O. H., Moore P. E., Platt, B. S., Sebrell, W. H., Tice, J. W., Tisdall, F. F., Wilder, R. M. and Zamecnik, P. C.: Medical Survey of Nutrition in Newfoundland, Canadian Medical Association Journal 52:241, March 1945.
4. Beust, T. V. (a) A contribution to the Morphology of the Microorganisms of the Mouth. Dental Cosmoa, 50:594, 1908. (b) Spirochetes and Fusiform Bacilli of the Mouth. Journal of American Dental Association 16:1415, 1929.
5. Box, H. K. (a) Can Specific Infective Factors Operate to Deepen a Pocket? Journal of Canadian Dental Association 10:430 October 1944. (b) Necrotic Periodontitis. Oral Health 35:324 May 1945.
6. Smith, D. T., Oral Spirochetes and Related Organisms in Fuso-Spirochetal Disease. The Williams and Wilkins Company 1932 Page 57.
7. Vivian, R. P., McMillan C., Moore, P. E., Robertson, E. C., Sebrell, W. H., Tisdall, F. F., McIntosh, W. G. The Nutrition and Health of the James Bay Indian. In print for the Canadian Medical Association Journal. December 1948.
8. Sebrell, W. H., Butler, R. E. Riboflavin Deficiency in Man (Ariboflavinosis) Public Health Report 54:2121, 1939.
9. Hanley, F. W., and Pett, L. B., Dental Caries among British Columbia and Saskatchewan School Children. Journal Canadian Dental Association 13:314 July 1947.
10. Arnold, R. A. Jr., Dean, H. T. and Singleton, D. F. The Effect on Caries Incidence of a Single Topical Application of a Fluoride Solution to the Teeth of Young Adult Males of a Military Population. Journal of Dental Research 23:158 June 1944.
11. Klatsky, M. Studies in the Dietaries of Contemporary Primitive Peoples. Journal American Dental Association 36:391 April, May 1948.
12. Arkle P. W. The Dental Condition and Foods of the Indians of James Bay,

Northeastern Canada. Thesis of B.Sc. (Dent.) Faculty of Dentistry, University of Toronto 1942.
13. Adamson, J. D., Jolliffe, N., Kruse, H. D., Lowry, O. H., Moore, P. E., Platt, B.S., Sebrell, W. H., Tice, J. W., Tisdall, F. F., Wilder, R. M., and Zamecnik, P. C. Medical Survey of Nutrition in Newfoundland. Canadian Medical Association Journal 52:240 March 1945.
14. Davidow, Capt. S., Gingivitis Among the Bantu. The South African Dental Journal 18:165 June 1944.
15. Platt B. S., Nutrition in the British West Indies. His Majesty's Stationery Office, 1946 Colonial No. 195.
16. Linghorne, W. J., McIntosh, W. G., Tice, J. W., Tisdall, F. F., McCreary J. F., Drake, T. G. H., Graeves, A. V., Johnstone, W. M. The Relation of Ascorbic Acid Intake to Gingivitis. Journal Canadian Dental Association 12:65 February 1946.
17. Smith, D. T., Oral Spirochetes and Related Organisms in Fuso-Spirochetal Disease. The Williams and Wilkins Co. 1932 Page 55.
18. Rose, R. S. A cruise on the Mission Ship Rendezvous. Journal Canadian Dental Association 13:328 July 1947

Editor's note:—The Journal Committee and staff of the Journal of the Canadian Dental Association are greatly indebted to the officers of the Canadian Medical Association Journal for permitting the use of the coloured prints which appear with this paper.

ANNOUNCEMENTS

Dominion Dental Council Examinations

The written Examinations will be held from June 13 to June 18, 1949 from 9 a.m. to 12 noon.

The Clinical examinations will be held as soon after convocation as possible, at the convenience of the Clinical Examiners in each centre. All candidates should get in touch with the Clinical Examiners to secure dates and advice as to what equipment they will be required to provide.

The fee for Class A and E is $100.00 and application forms to take the examination may be obtained at the respective Dental Schools. These application forms should be completed and in the Secretary's office *not later than May 15.*

The fee for Class D is $150.00 and application forms may be obtained by writing the Secretary. Completed application forms should be in the Secretary's office *not later than April 15.*

A. J. Brett, Secretary Treasurer,
Regina, Saskatchewan.

Graduate Course in Orthodontics

A graduate course in Orthodontics, of one-year duration, given in the English language, will begin on September 15, 1949, at the Université de Montréal. As the number of candidates is limited to ten, applications should be sent in as soon as possible for the coming year.

Any information regarding this course and all applications should be mailed to:

Doctor Paul Geoffrion, *Vice-Dean,*
Head of Orthodontic Department, Faculty of Dental Surgery,
Université de Montréal, 2900 Mount Royal Blvd.,
Montreal (26), Que. Canada.

Mid-Atlantic Seminar in Oral Medicine

This Seminar will be held May 22-27, 1949, at the Skytop Club, Skytop, Pennsylvania. It is being offered by the Postgraduate Division of the University of Pennsylvania School of Dentistry.

The fee for this Seminar including registration, lodging and meals for the 5 days is $250.00.

Further information can be obtained from Dr. L. W. Burket, Postgraduate Division, School of Dentistry, Univ. of Pennsylvania, 4001 Spruce St., Philadelphia 4, Penn.

A Discussion of Fuso-Spirochaetal Disease of the Mouth*

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I WISH to consider the validity of recognizing "fuso-spirochaetal" disease, which has been seriously questioned in recent years. I do not propose to enter into the detailed problems involved in the transmission and the establishment of the infection, or the processes of the declared disease and its treatment. Only relevant points bearing on the main theme will be mentioned.

Apart from Leeuwenhoek's observations, spirochaetes have been known in the human mouth since Cohn described them in 1875, after they had been described in material from lung abscess in 1867 by Leyden & Jaffe. They were seen with fusiform bacilli in ulcerative stomatitis by Frühwald in 1889 and the fusiform bacilli were described from noma in 1893 by Elder. In 1894 Plaut saw spirochaetes in cases of angina and associated them with what he called "Miller's bacillus" which he did not clearly define. In 1896 Vincent described the association of spirochaetes with fusiform bacilli in cases of "hospital gangrene" and pharyngeal angina and his original illustrations show exactly what we see today in stained films. Vincent recognized two kinds of fusiform bacillus although he did not culture them. The situation has been complicated since that time: firstly, by the universal recognition that various spirochaetes and fusiform bacilli can be found in the mouth of almost everyone; secondly, by the fact that the species identification of the spirochaetes and in practice the identification of the fusiform bacillus depend on examination of microscopical morphological characters; and thirdly: by the belief of certain competent observers that the spirochaete and the fusiform bacillus are stages or different forms of the same organism, so that one may develop from the other. Many equally authoritative workers do not believe this. Thus the exact identification of the organisms suspected of being the aetiological agent has become extremely difficult.

With this uncertainty in the exact recognition and differentiation of species of the possible aetiological agents, together with the range of clinical disease, from mild local inflammation to destructive perforating necrosis with grave and even fatal general manifestations, it is not surprising that a state of confusion exists. A reflection of this uncertainty is the variety of names which have been given to the disease, running the gamut from possibility to improbability, but it is not worth while reciting the thirty-seven I have met with and there may be a few more. Without isolation and identification of the suspect organisms it is obviously impossible to know whether apparently normal people may not be carriers, or suffer subclinical infections, and able to transmit infection to susceptible individuals. Quite evidently the disease is not a well defined clinical entity and too much reliance must not be put on a purely clinical diagnosis to limit the field of bacteriological enquiry. Without any doubt, cases occur in which both the clinician and the bacteriologist would not hesitate to make the diagnosis and these emphatically keep the question very much alive.

Of recent years considerable doubts have been raised as to the causative role of Vincent's spirochaete and fusiform bacillus in gingivitis and angina. Official committees of the American Dental Association have stated that "there is no demonstrable proof that

*Presented at the 24th Annual Fall Clinic of the Montreal Dental Club, October, 1948.

these organisms are or are not the cause of Vincent's infection" and from the top of this fence the Committee "largely" discounts the theory that Vincent's Fuso-spirochaetal Disease is a communicable infection of a high order of infectivity.

Some there are, however, who still maintain emphatically the existence of Vincent's Fuso-spirochaetal Disease. Others hold that these organisms are present in all normal mouths and merely avail themselves of the opportunity afforded by bad oral hygiene, or take advantage of unhealthy tissues so that there is then a "marked proliferation of fuso-spirochaetal organisms." As is to be expected, there are those who hold a middle course, maintaining that abnormal conditions allow of increase of fuso-spirochaetal organisms and simultaneous spread of the disease, "while healing takes place in proportion to the decrease in the number of organisms."

Thus it seems we have a riddle almost as dark and puzzling as it was fifty-three to fifty-nine years ago, when it was propounded by Frühwald, by Plaut and by Vincent. The difficulties hindering its solution loom as large as ever, but the wealth of information which is available to circumvent them has not been sifted and sorted to that purpose. The first need is the isolation and exact identification of possible aetiological organisms and then recognition of possible contributory conditions or disfunctions. Without this the manner of dissemination and the process of development of the disease cannot be adequately investigated, and, in addition, the evaluation of therapeutic measures is hindered by lack of accurate diagnosis and the difficulty to estimate cure.

Confining attention to the two organisms definitely under suspicion up to now, *Borrelia vincenti* and *Fusibacterium plauti-vincenti*, it is very uncertain that the spirochaete has ever been properly grown and maintained in cultures and the isolation and maintenance of the fusiform bacillus is difficult. The characterization of the *Fusobacterium* in the literature by different authors is often contradictory and the differentiation of the four species of the genus is not convincingly certain. It is also troublesome that no satisfactorily susceptible laboratory animal has been found and that immunological studies have not proved of much value as yet. The impelling use of antibiotics in the treatment of suspected cases will make it even more difficult than it has been in the past to investigate the problem, if it proves to be the elective treatment hoped for. Until recently the unrelated diversity of treatments of themselves proved their inefficacy and consequently the presumptive evidence of aetiology by disappearance of the organisms in question is not entirely satisfactory, although it is suggestive.

It is important to decide whether the disease is primarily an infectious process. It has been derogatively suggested that it is a secondary implantation of more or less saprophilic organisms in devitalized or impaired tissues brought about primarily by avitaminoses or general debilitating conditions or diseases. But even were this true, it must be recognized immediately that this secondary infection assumes a proportion and a destructive activity which completely dominates the situation. So, in any case, the question whether the disease is a primary infection or is initiated indirectly looses importance once the infection is established. In deficiency diseases or in dehabilitating conditions, or in poisonings, in which changes in the gums are symptomatic, it is usual for the gums to be uniformly affected, but we have all seen many cases of Vincent's Gingivitis in which the lesions are discontinuous and separated by regions of perfectly healthy tissue. This alone argues in favour of the possibility of primary infection. The argument for primary infection is strengthened by its occurrence in persons in which no predisposing abnormality or disease can be demonstrated. Obviously an

infectious agent is capable of taking advantage of abnormality of structure or increased host susceptibility due to whatever cause. This is not uncommon in other diseases, such as cholera, subacute bacterial endocarditis, cerebro-spinal fever, and many another; frequently some circumstance serves as a predisposing condition. As further support for the disease being a primary infection, there are examples in the literature of outbreaks in groups and of successive incidence in associated individuals, and, quite as important, the occurrence of cases of the most severe nature, such as noma, among a group of cases of ordinary character.

Whether or not the susceptibility of individuals is affected by subsidiary circumstances is chiefly a question of clinical importance. It is desirable to know, for example, whether noma occurs only in undernourished debilitated persons as has been suggested and whether it is true that the tropical forms of the infection are truly more severe than those in temperate climates. It is equally desirable to know whether *Borrelia vincenti* and *Borrelia bronchialis* are really different species or a synonymy and also how many different species there are and whether they differ in infectivity.

The causative role of *Borrelia vincenti* and of *Fusobacterium plauti-vincenti* in the disease has been called into question by individuals and by committees appointed by responsible organizations. The fact remains that very large numbers of observers have found these to be the only constant forms present in characteristic cases, and they are then present in great abundance. It is also true that they disappear with healing of the lesion. Although other spirochaetes and fusiform bacilli are often present too, most of them are recognizable to the practiced eye as different to those accepted as Vincent's organisms. The differences between the various kinds are much more evident in dark-field mounts than in fixed and stained preparations, upon which too much reliance must not be placed. The Vincent spirochaete undoubtedly belongs to the genus *Borrelia* which is easily distinguishable from others of the genera *Treponema* and *Leptospira* which may be present superficially without any evidence of having primary significance.

The distribution of the organisms in the lesion has unquestionable significance and it is unfortunate that sections of early and of mild lesions are difficult to get, so that the evidence is mostly from the most severe forms of the disease. In properly fixed and stained sections three zones are usually distinguishable: a zone of necrosis constituting the pseudo-membrane, a zone of granulomatous inflammation of variable depth and the zone of underlying seemingly healthy tissue. It is characteristic that the demarcation between these zones is hard and sharp. In the necrotic zone there are many of both the Vincent organisms, disposed in all directions, together with abundance of other spirochaetes, other fusiform bacilli and a great abundance of other kinds of bacteria. At this border between the zone of necrosis and the zone of granuloma tissue there is a band of close packed characteristic fusiform bacilli arranged in a palisade, like a picket fence, lying side by side, pointed with one end just into the granuloma tissue and the other end towards the necrotic zone. This is a most striking and astonishing arrangement and gives the impression of an advancing line of battle. No fusiform bacteria are seen ahead of this line but throughout the granuloma tissue lie the spirochaetes, and they are even described as penetrating into the seemingly healthy tissue. A situation such as this cannot be lightly discounted and no explanation other than a causative infection is satisfactory.

Most commonly, in practice, specimens taken for diagnostic examination come from the necrotic zone, with its mixed added population of unrelated and unimportant bacteria, so it is not surprising that they often give a confused picture. When the lesions are

small it is usually difficult to get a suitable specimen to examine, and this, with the difficulty of exact identification of the few organisms seen, sometimes renders it impossible to make a definite diagnosis. I have known a diagnosis of Vincent's angina made on a microscopic smear from the surface of a true diphtheria membrane, because some ordinary mouth spirochaetes having no resemblance to *Borrelia vincenti* were seen. The difficulty of exact identification of species on morphological evidence is important to the question of whether *Borrelia vincenti* and *Fusobacterium plauti-vincenti* are ever present in a normal healthy mouth without evidence of lesions. It would be wonderful to know the true answer, but that is not of such importance as to deserve the weight given to the supposition that they are found there. I don't know how anyone can make the identification under those conditions. Nevertheless, supposing they are really there, it does not detract in any way from the evidence of aetiology we have considered, any more than the isolation and *perfect identification* of the meningococcus in the nasopharynx of an absolutely healthy carrier invalidates the causative role of that organism in epidemic cerebro-spinal meningitis.

On general principles, it is not to be supposed that Fuso-spirochaetal Disease is the only possible form of gingivitis. There are several species of bacteria belonging to various families which are known to be potential pathogens and which are commonly found in the mouth if sought for. There are also bacteria sometimes found in the mouth, whose potentialities are unknown and whose presence is not ordinarily recognized. Whether any of these cause clinical conditions liable to be confused with some forms of Fuso-spirochaetal Disease remains to be discovered. Perhaps the tendency to discard the term Pyorrhoea may open up this field of investigation. Quite evidently there is still much of importance to be done in dental bacteriology and every reason to encourage specialization in that field.

On the evidence I have presented to you, I have come to the conclusion that Vincent's Gingivitis and Vincent's Angina are primary infections, exhibiting varying degrees of severity, caused by the combined action of *Borrelia vincenti* and *Fusobacterium plauti-vincenti*. Also that there is urgent need for methods of culture and exact differentiation of the species of *Borrelia* in the mouth, in the respiratory tract and in the intestine. On this evidence, imperfect as it admittedly is, I, for one, am not prepared to accept the findings of the Committee of the American Dental Association.

It is entirely possible that more than one Fuso-spirochaetal disease exists and that they cannot be differentiated by simple microscopic examination of the organisms in their native exudate. This would not be a strange situation, for it is well known that there are at least five forms of bacillary dysentery with practically indistinguishable clinical signs, symptoms and epidemiology. These five distinct species of *Shigella* look absolutely identical microscopically in a blood and mucous dysentery stool and can only be distinguished apart in pure culture.

The bacteriologist very seldom gets the opportunity to take the specimens he needs from a suitable case and the practitioner is anxious to institute effective treatment as quickly as possible. The patient is anxious to be cured instantly and the situation is not explained to him. With the existing range of available anti-biotics and the probability of new ones, this already unsatisfactory situation is likely to deteriorate rather than to improve, unless an active interest in coordinated research is developed. The urgent practical need is for preventive measures rather than curative procedures to patch up a damaged individual, and preventive medicine depends upon exact knowledge. Our knowledge of Fuso-spirochaetal disease is inadequate and a better understanding of it is obviously desirable and important.

RECENT ADVANCES IN ANAESTHESIA

by L. M. HAMPSON, M.A., D.A., (R.C.P. & S., Eng.), Ottawa, Ontario

IT would take great restraint on the part of an anaesthetist, called upon to present some of the recent advances in anaesthesia to a dental gathering, to avoid reference to the origin of general anaesthesia in that profession. The era that followed was largely made possible by the sudden realization that surgery, at last, could be a painless, even relatively comfortable experience.

It has been pointed out[1] that progress in medical science is accomplished by two methods, first—"the continuous slow accumulation of bits of knowledge which insensibly alter the current practices day by day, until the accepted technique of to-day becomes markedly different from that of a generation ago." Secondly — the discontinuous where "a great volume of knowledge piles up; suddenly there is a dramatic incident, men's imaginations are fired and overnight there is a rush of eager workers to translate this knowledge into an entirely new concept of practice."

The history of anaesthesia shows each type of advance and I propose to present several which have achieved or are achieving a definite place in the field of relief of pain during dental or surgical procedures.

Due in great measure to the impact of two great wars at short interval, the science of anaesthesia has been forced along a path of rapid development and has now gained recognition as the most recent medical specialty. To those pioneers, who, just over one hundred years ago, introduced clinical anaesthesia by inhalation of ether vapour, the proportions which the infant has attained would, no doubt, seem astounding.

The 1914-18 war was responsible for the general adoption of the endotracheal method of anaesthesia which figures so largely in the proper management of the face and jaw injuries resulting from modern combat. Safe surgery in the thorax became possible only after this technique became well known. Once the trachea is extended beyond the lips by introduction of a wide-bore rubber tube having an inflatable cuff at its internal end, the surgeon is given complete freedom of action in realignment of bone fragments and securing normal occlusion of the teeth. The desirable technique in these cases is a nasal intubation; and cuffed tubes are being so smoothly manufactured to-day that introduction through a nostril, past the vocal cords and into the trachea is a relatively easy task.

During World War 2, performance of this manoeuvre was further simplified by the introduction of the first intravenous agent to stand up to the rigid requirements of a good anaesthetic drug. Sodium pentothal, a short acting sulphur-containing barbiturate, was fortunately synthesized in the early 1930's. The basic clinical investigations largely had been completed when the renewed need came along with the outbreak of the recent conflict. Its speed and smoothness of action with almost total lack of excitement provided the answer in these cases where the standard methods of induction of anaesthesia prior to intubation were difficult or next to impossible. Sodium pentothal, in point of fact, became the wonder-baby of anaesthesia. It is rapidly supplanting the time-honoured agent ether and latterly has made deep inroads into those fields where it was formerly held that the spinal method alone could provide proper conditions for surgery.

This latter development largely came about with the appearance of the term "combined anaesthesia". It has been recognized within the past few years that, by a judicious combination of agents, anaesthesia can be affected

without any one being forced to carry the whole load. Thus the best properties of several drugs can be made, by proper co-ordination, to supplement the deficiencies in others.

The anaesthesiologist is indebted for this happy state of affairs, in part, to a pharmacological oddity, old in the history of man yet new in clinical application. The South American Indians have long used extracts of a variety of native plants for tipping their arrows in hunting. This extract, which we call curare in its purified form, temporarily paralysed their fleet quarry. Today we have this substance, long thought to be of no practical use, at our command in the production of muscle relaxation, without which, abdominal operations are virtually impossible. Thus, with sodium pentothal ensuring a swift and pleasant oblivion, a potent gas such as cyclo-propane to assist in securing complete anaesthesia and curare producing adequate relaxation of the abdominal muscles, we have a combination which is close to the perfect choice.

The post-operative awakening is of course, just as important to the patient as that he should have a pleasant induction. Again, experiences of World War 2 are drawn upon in the use of procaine intravenously. During operation, the same needle which delivered the sodium pentothal, is used for a slow infusion of 0.1 per cent procaine. The post-operative pain of abdominal procedures is thus greatly reduced without the necessity of large doses of opiates whose undesirable side-actions depress respiration and increase incidence of serious pulmonary complications.

Patients and anaesthetists alike, ever since the dawn of surgical anaesthesia, have been awaiting the appearance of drugs which would provide an awakening unaccompanied by nausea and vomiting. The early 30's provided two such: sodium pentothal, which is rightfully so popular because of its euphoric after effects, has been mentioned before. The other is di-vinyl ether whose properties are vastly different from the di-ethyl ether with which we are all familiar. Children do not greatly object to its smell and its potency is such that a small amount produces analgesia or anaesthesia as desired. Because of its high volatility, excretion is extremely rapid, consciousness being regained in a matter of a few breaths. After effects are negligible and some dental clinics in the United States have reported large series of cases with no vomiting during the recovery period. It can also be used as a supplement for nitrous oxide oxygen for more extensive dental procedures.

In a somewhat different class is trichlorethylene or trilene, a liquid of low volatility which has secured extensive acceptance in Great Britain. It is particularly useful for analgesia and simple self-administrators of a draw over type are easily constructed. Again post-operative effects are almost nil. Other virtues are cheapness and non-inflammability.

Outside the realm of general anaesthesia in surgery is the increasing use of cold to produce insensitivity to pain. This method has become firmly established for certain types of cases which previously had done poorly with classical treatments. These cases are usually very poor surgical risks such as massive gangrene of extremities in diabetics. With refrigeration of the affected part to a temperature of about 40 degrees Fahrenheit, tissue metabolism is lowered, spread of infection stops and absorption of toxic products from the gangrenous area decreased. With this change in metabolism, pain also disappears and amputation can be accomplished without any further upset of the patient's general condition. This method is also being applied to injuries hazarding the blood supply of a limb, thus decreasing the demand of the damaged tissue for oxygen and allowing it to live at a subnormal level until an alternative supply is opened up.

No mention has been made so far of the regional techniques of anaesthesia which find such an important place in dentistry. Blocking of isolated nerves or bundles of nerves is finding increased favour for particular procedures.

One of the most recently standardized techniques is that of brachial plexus block. Here, the hand and arm can be totally anaesthetized by one injection above the clavicle, where the nerves group together as they pass over the first rib. One of the peculiarities of the effect of this block is that, in most cases, some degree of motor power remains. This finds application in the repair of multiple cut tendons at the wrist. Identification of these structures, to ensure the re-joining of each severed tendon to its mate, is thus made easier by the active co-operation of the patient.

A side-effect of this form of anaesthesia is the coincident blocking of the sympathetic nerves supplying the blood vessels of the arm. When this occurs, the vessels dilate and oxygenation of the injured tissues increases. This dilatation of blood vessels also provides increased drainage and surgeons are only now recognizing the importance of this fact when swelling under a rigid plaster cast may become a serious complication.

Regional methods of anaesthesia have within the past few years invaded the realms of therapy due to these latter effects. The sub-oxygenation of muscles of the legs occurring in thrombosis in the deep veins is overcome by block of the sympathetic nerves to the lower limb. Vascular channels are opened up to break the vicious circle of deficient oxygenation initiated by the thrombosis.

Techniques of administration are always on the change. New products of chemical research are continually appearing. It is apparent from this short sketch of the newer and more useful, that the anaesthetist to-day, has much at his command and much to offer in this ever expanding field of the relief of pain.

ANNOUNCEMENTS

Nineteen Forty-nine Session of The Federation Dentaire Internationale

The next annual session of this Federation will be held in Milan, Italy May 30 to June 5, 1949. The executive had hoped that this meeting might be held is Oslo, Norway and the Norwegian committee expressed the wish of having the F.D.I. meeting coincide with an important Scandinavian Professional Reunion in October but as this date was not suitable the invitation of the Italian National Committee was accepted.

American Dental Society of Europe

This Society will hold a meeting in Paris on August 3-6, 1949.
Dr. F. Douglas Derrick, Secretary,
140 Park Lane, London, W.I., England.

Cincinnati Dental Society

On March 20 to 22 this Society will hold a Clinic Meeting and Children's Dental Health Day at the Netherland Plaza Hotel.

Academy of Cleft Palate Prosthesis

This Academy will hold its seventh annual meeting on March 21-22, 1949 at the College of Dentistry, Ohio State University, Columbia, Ohio.

"Your Ideas and Mine"

by IREAN C. BRUCE, Toronto, Ontario

1. When investing inlays, if the ring is set on a piece of blotting paper, the investment will set much quicker and be much harder because some of the water is absorbed by the blotting paper.
2. A light coating of vaseline on the inside of the lid of the acid container will help to eliminate acid fumes in the room, or a drop of mineral oil in the acid is also helpful for the same purpose.
3. A few drops of oil rubbed in the plaster bowl makes it look like new and the next mix of plaster will not adhere to the bowl.
4. Chloroform used on a small pledget of cotton and run against the engine belt will help to keep it new looking and will keep the Doctor's uniform from getting soiled if touched by the belt.
5. If instruments are dipped in alcohol immediately before using, they will not stick to zinc-oxide, eugenol paste or temporary stopping.
6. Cotton placed in the phenol container and saturated with the solution will help to avoid accidents; if phenol should touch tissue, apply alcohol immediately and prevent burning.
7. Discoloured copper bands can be made like new by heating them cherry red and plunging them in alcohol.
8. A few drops of oil are effective in cleaning Arkansas stone. Use acid on end of cotton roll once in a while to clean cuts in stone thoroughly.
9. The joints of "frozen forceps" can be quickly loosened by soaking in a solution of oxalic acid, but a simple application of camphophenique occasionally will avoid many difficulties.
10. Instead of cutting individual asbestos strips for casting rings just before use, prepare a supply in advance and keep the rings lined and ready for use.
11. A teaspoonful of salt added to the sterilizing water will hasten the boiling.
12. Iodine stains are easily removed by applying a 15% solution of sodium thiosulphate.
13. Silver Nitrate stains are easily removed by applying a saturated solution of potassium iodide.
14. Blood specks are easily removed from uniforms by applying peroxide; do not use frequently as peroxide will cause small holes in uniforms, but is handy occasionally.
15. Mix glycerine with pumice to keep it moist at all times for polishing purposes.
16. To hasten plaster setting use salt, also very warm water.
17. A stick lubricant applied to the grooves and sides of the cabinet drawers will make the drawer slide with amazing ease, avoiding the noise of instruments caused when opening the drawers.
18. To keep instruments bright place a piece of camphor in the instrument drawer; it has the same results on silver.
19. Mark the Doctor's name on all trays with a No. 3 bur, to insure their return from the laboratory.
20. A fine gloss can be put on dentures by brushing them with glycerine after polishing and then rubbing briskly with a dry cloth.
21. If amalgam accumulates and hardens in the tip of the amalgam carrier, heat the tip of the amalgam carrier "cherry red" for a few seconds and amalgam will loosen immediately.
22. Use a small shaker containing dry

plaster to sprinkle all colloid impressions when removed from the mouth; rinse well with running water; repeat if necessary. This method removes the sticky saliva and when the model has been poured it is much smoother, therefore, a better model to work with.

23. To prepare a very good matrix wedge, use soft wood matches. Dip the matrix in wax to avoid irritation of gum tissue.
24. A long-handled brush is excellent for cleaning the cuspidor.
25. To the rubber dam punch hole apply a little shaving cream on the underside, and it will slide to position easily on the tooth.

"Are Any of These Mill Stones Holding You Back?"

1. Lack of enthusiasm for Dentistry.
2. Operating inefficiency.
3. Laziness.
4. Irritable or grouchy disposition.
5. Abruptness in mannerisms and speech.
6. Bashfulness.
7. Lack of courage.
8. Lack of confidence and self-reliance.
9. Detrimental social friends or contacts.
10. Cigarette or other disastrous habits.
11. Late hours consistently, which tire you physically and mentally.
12. Tardiness.
13. Improper management of income.
14. Indifference about credit responsibility.
15. Reclusion that encourages you to remain away from other practitioners or societies.
16. Inability to live up to recognized moral standards.
17. Lack of business ability.
18. Self - satisfaction which hinders your self-improvement.
19. Lack of progressive ideas.
20. Office atmosphere.
21. Office associates.
22. Outside interests which cause divided attention to your practice.
23. Inability to explain the value of professional or business services to your patients.
24. Impaired physical condition.
25. Halitosis or B.O.

2849a Dundas Street West.

Editorially Expressed

Our boasted twentieth century civilization needs to pause in its self-applause until it finds a way to bring the benefits of the dental art and science we now possess to the relief of the 79 *per cent of our* 125,000,000 *people who regularly receive no dental care in any given year. That is an economic problem first and a professional problem second. The responsibility for bridging the gap between what we are equipped to do and what we ought to do in dentistry rests first upon society and second upon the profession. In the mercy of God and in the light of true dental science the lowest, meanest human sufferer is entitled to all that can be done for him. We ought to have ingenuity enough to accomplish this noble end without destroying the relationship which exists between individual dentist and individual patient and without asking dentists to bear burdens which society in general should assume. A like problem exists in all professions which are instituted to serve humanity. The problem in all its economic and professional aspects is in many ways the most far-reaching and serious issue before the American people today. The challenge of it gives zest and promise to the dentistry of the coming years.—Harlan H. Horner,* Proceedings of the American Association of Dental Schools, 1935, *pp.* 72-73.

A secret: Something you tell to a number of people individually.

ANNOUNCEMENT

Annual Convention The Canadian Dental Association

IN CO-OPERATION WITH

The Western Canada Dental Society

The Bessborough Hotel, Saskatoon
Convention Home of Canadian Dentists
June 5-6-7-8.

INVITATION

With the greatest of pleasure we invite you to this National Convention to be held in Saskatoon on the above dates.

To us it seems unnecessary to point out to you the importance of such meetings—for the knowledge to be gained—old friendships to be renewed and new friendships to be made.

The different committees in charge of arrangements are working hard to ensure your greatest profit and enjoyment.

Such outstanding essayists as

1. Dr. P. G. Anderson, Toronto, Operative Dentistry
2. Dr. W. J. Pryor, Cleveland, Prosthodontia
3. Dr. J. C. Brauer, Seattle, Pedodontia & Preventive Dentistry

will be present. Watch your next issue of the Journal for the complete program.

To those of you considering extending your holiday following the convention, may we suggest a visit to Prince Albert National Park in Saskatchewan, or to Alberta's pride, Jasper or Banff.

Further details regarding the above trips will appear in a C.D.A. news letter.

Address all communications to Dr. L. D. Haselton, 808 Canada Bldg., Saskatoon.

ANNOUNCEMENT

Program of National Convention

SUNDAY, JUNE 5.

	8.30 P.M.	Reception

MONDAY, JUNE 6.

A.M.	9.00-10.00	Opening exercises
	10.00-11.15	Essayist
	11.15-12.00	Exhibits—Pictures
	12.00- 1.45	Luncheon
P.M.	2.00- 3.15	Group Clinicians—Pictures
	3.30- 4.45	Group Clinicians—Pictures
	5.00- 6.00	Exhibits—Pictures
	6.15- 7.45	Dinner
	8.00- 9.00	Essayist
	9.00-10.00	Group Clinicians—Pictures

TUESDAY, JUNE 7.

A.M.	9.00-10.15	Essayist
	10.30-11.45	Essayist
	12.00- 1.45	Luncheon
P.M.	2.00- 3.15	Essayist
	3.30- 4.30	Group Clinicians
	4.30- 6.00	Exhibits—Pictures
	6.30	Dinner and Dance

WEDNESDAY, JUNE 8.

A.M.	9.00-10.15	Essayist
	10.30-11.30	Group Clinicians
	12.00- 2.15	Luncheon
	2.30- 5.00	Table Clinics—Exhibits—Pictures (Salons)

LADIES' PROGRAM

Canadian Dental Association, June 1-5

GENERAL CONVENER.....Mrs. R. R. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
SOCIAL CONVENERS.....Mrs. R. V. Little & Mrs. F. G. Salisbury

THURSDAY—JUNE 2—Afternoon at the home of Mrs. F. G. Salisbury—(Assemble in Ladies' Lounge, Main Floor.)

FRIDAY—JUNE 3—2:00 P.M. MOTOR TOUR OF CITY—(Assemble in Ladies' Lounge, Main Floor.) Buffet Supper at Home of Mrs. L. D. Haselton.

SATURDAY—JUNE 4—After 9:00 p.m.....COFFEE PARTY

SUNDAY—JUNE 5—PICNIC AT FORESTRY FARM

GOLF BY REQUEST ANY DAY

LADIES' PROGRAM

Western Canada Dental Society, June 5-8

GENERAL CONVENER.....Mrs. R. L. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
REGISTRATION CONVENER.....Mrs. M. J. MacDonell
SOCIAL CONVENERS.....Mrs. L. D. Haselton & Mrs. N. F. Gropper

SUNDAY—JUNE 5—Reception and Registration—

MONDAY—JUNE 6—Afternoon Tea at Home of Mrs. E. B. Nagle—(Assemble in Ladies' Lounge—Bessborough Hotel.)

TUESDAY—JUNE 7—MOTOR TOUR BY REQUEST

Luncheon at 1:30 p.m. at Saskatoon Golf and Country Club. (Assemble in Ladies' Lounge—Bessborough Hotel).

7:00 p.m. BANQUET AND DANCE

WEDNESDAY—JUNE 8—11:15.....LUNCH AT BESSBOROUGH HOTEL

GOLF BY REQUEST ANY DAY

ANNOUNCEMENTS

Convention of Western Canada Dental Nurses and Assistants

This convention will be held in Saskatoon June 5-8 in conjunction with the convention of the Western Canada Dental Society. The following is an outline of the program:

SUNDAY, JUNE 5

2:00 p.m.	7:00 p.m.	Registration
8:30 p.m.		Reception

MONDAY, JUNE 6

9:00 a.m.	10:00 a.m.	Welcoming Addresses
10:00 a.m.	11:30 a.m.	Business Meeting of the Western Canada Dental Nurses and Dental Assistants.
12:00 a.m.	1:45 p.m.	ASH-TEMPLE CO. Luncheon & Speaker
2:00 p.m.	3:15 p.m.	Clinician
3:30 p.m.	4:45 p.m.	Essayist
5:00 p.m.	6:00 p.m.	Exhibits & Pictures
9:00 p.m.	————	Saskatoon Dental Assistants' "At Home"

TUESDAY, JUNE 7

9:00 a.m.	10:15 a.m.	Essayist
10:30 a.m.	11:45 a.m.	Business Meeting
12:00 a.m.	1:45 p.m.	DENCO (WESTERN) LTD. Luncheon & Speaker
2:00 p.m.	3:15 p.m.	Essayist
3:30 p.m.	4:30 p.m.	Clinician
6:30 p.m.	————	BANQUET & DANCE

WEDNESDAY, JUNE 8

9:30 a.m.	————	BREAKFAST PARTY
2:00 p.m.	3:15 p.m.	Essayist

Enquiries and communications regarding the Convention should be addressed to: Mrs. Thelma Gourlay, Secretary of the Saskatoon Dental Assistants' Society, c/o Dr. F. R. Smith, 606 Canada Building, Saskatoon, Sask.

District of Columbia Dental Society

This Society proudly announces its Annual Postgraduate Clinic to be held at the world famous Shoreham Hotel in Washington, D.C., starting Sunday, March 13 and continuing through Wednesday, March 16.

Further information and programs may be obtained from the Secretary of the Clinic, Sterling G. Mead, D.D.S., 1149 16th Street, N.W., Washington, D.C.

CIVILIZATION NEEDS FRIENDS

Civilization has few friends. Nobody cares aggressively about its continuance. It is accepted casually, like the air we breathe and the rhythm of the heart. But can we longer leave it safely to chance, or to the whims and winds of biological evolution? Civilization needs friends: it needs planning and thoughtful action, or it will recede from under those animals it has helped to make glorious, leaving their cultures wrecked, perhaps even leaving the species headed for savagery, weakness, and the fossil-loving rocks.—Harlow Shapley.

It is easier to produce ten volumes of philosophical writing than to put one principle into practice.—Andre Maurois.

When love and skill work together expect a masterpiece.—John Ruskin.

The Forum

THE NECESSITY AND IMPORTANCE OF ADOPTION OF SEDENTARY HOBBIES

by FREDERICK A. WILLIUS, M.D., M.S. in Medicine, Section of Cardiology, Mayo Clinic, Rochester, Minnesota

The following discussion is directed chiefly to professional men and particularly to physicians, although the remarks are applicable to many others. I particularly single out the physician because during many years of close contact with him, both as his medical adviser and colleague, I have been repeatedly impressed with his inordinate monocentric tendency. Frequently his only interest in life is the practice of his profession and the inseparable obligations of his profession. When he embraces hobbies they are usually of a strenuous nature, such as hunting, fishing, golfing and gardening. These are all commendable diversions for younger individuals, and even for certain middle-aged persons, provided their state of health permits such periodic exertional indulgences. However, the physician often fails to recognize the fact that ultimately, either through the normal metamorphosis of the aging process or through the unanticipated occurrence of a physical handicap, his accustomed strenuous or semi-strenuous hobbies no longer can be enjoyed. He then presents the figure of a hapless, depressed and often frantic personality who suddenly, and often too late, realizes that the very foundation of his restricted world has vanished. Life becomes a conflict of emotions and each day a futile eternity.

In a previous publication I discussed the subject of man's adjustment to the advancing years of life, and I emphasized several basic facts which also apply to this discussion. "Man spends approximately the first twenty-five years of his life in preparation for maturity, to learn a trade, an occupation or a profession. When this preparation is achieved successfully, the daily round demands increasing application, activity and responsibility, and the stress and strain contingent on the constructive execution of the daily program are increased. Man grants little consideration to an equally important period of preparation, that for the post-prime years of life, when modifications in his mode of working and living are exacted by the inevitable biologic laws. Only too often, man believes himself immune to nature's scheme (a few appear to be) and relentlessly carries on with ever increasing industry until some vital structure fails and sudden dissolution or pathetic invalidism results."

There is commonly no coincidence between the calendar age and the biologic age of an individual. There are many influences which determine this disparity, and among them are the forces of heredity, the manner of life and habits, temperament, the fortunes and misfortunes of human existence and the individual's ability to adapt himself to inevitables. It is a well-recognized fact that cardio-vascular disease is remarkably prevalent among physicians, and it is almost a daily experience to witness a career suddenly

and tragically interrupted or greatly modified by the unanticipated occurrence of this kind. Even when survival eventuates, the long convalescence and the prolonged period of limited rehabilitation frequently become a veritable nightmare.

There seems, then, to be little valid argument against the key premise of my thesis that physicians and others ought to embrace sedentary hobbies, relatively early in life. Potential hobbies are too numerous to mention, and must be selected primarily by the individual on the basis of interest and adaptability. Hobbies should be of a constructive nature, so that the satisfaction of accomplishment can be enjoyed. They should emphasize the use of the hands as well as the mind. A mind that is not constructively employed because of lack of interests soon retrogresses and causes decadence of spirit, morale and intelligence.

Many examples are on record where middle-aged and elderly persons have adopted new interests and hobbies and have converted them both to accomplishments of self-satisfaction and sometimes to remunerative reward. There is the case of the American grandmother who adopted oil-painting as a hobby after the age of 60 years, and now has won the admiration and respect of artists for the superb colour effects of her landscapes. While everyone cannot become an artist, although many physicians have become accomplished in the arts, countless comparable hobbies are available to those who seek them.

It is only when this type of philosophy is accepted and made to work that the later years of life through natural sequence, or the earlier years of life through physical misfortune, can be made interesting and pleasurable.—From the "*Proceedings of the Staff Meetings of the Mayo Clinic,*" volume 23, pages 412-413 (Sept. 1) 1948.

VITAMINS, SULPHONAMIDES AND ANTIBIOTICS IN PERIODONTAL THERAPY

by F. D. OSTRANDER, D.D.S., M.S., Ann Arbor, Mich.

Conclusion of paper in Journal of A.D.A., Sept. 1948

To summarize briefly the relation of vitamins to periodontia, it would seem that certain deficiency states of ascorbic acid, riboflavin and nicotinic acid may manifest themselves in or about the mouth and that these deficiency symptoms are directly amenable to treatment by these respective vitamins. On the other hand, in the light of present data it would be a mistake to consider any one of these vitamins or any combination of them to be specific for Vincent's disease, and attempts to use them to the exclusion of well-established forms of therapy will result in only partial success or complete failure.

In final resumé, in this article an attempt has been made to evaluate the application of the newer drugs in periodontia largely on the basis of the known pharmacologic characteristics. From the standpoint of the teacher of dental pharmacology and therapeutics thus attempting a critical appraisal of the uses of vitamins, sulphonamides and antibiotics in clinical periodontia, the following conclusions would seem justified on the basis of presently available evidence:

1. The potential hazards in the use of the sulphonamides are extensive. Since there is little evidence that would indicate them to be superior to other less hazardous forms of treating periodontal infections, there seems little rational reason for their use.

2. The vitamins and penicillin would appear to be valuable adjunctive agents in the treatment of certain periodontal conditions, but there has been too much of a tendency to con-

sider them "wonder drugs" which would eliminate the "work" in periodontia. Unfortunately there seems no logical basis for such a conclusion, and the successful periodontist will continue to be the one who not only is skilled in the application of drugs but also practises meticulous correction of the many well known predisposing factors which contribute to periodontal disease.

3. Although the vitamins and antibiotics have established values as presently used in periodontia, much still remains to be clarified in the way of optimum methods of application and as to their limitations.

A great challenge for further critical study of these drug groups faces the clinical periodontists. Particularly in the field of the antibiotics, further extensive and well-controlled studies are needed to complete the evaluation of penicillin and to explore the possibilities of the several other members of this group which probably will become available in the immediate years to come.

SUBACUTE BACTERIAL ENDOCARDITIS

by HOWARD B. SPRAGUE, M.D., Boston, Mass.

Condensed from Transactions & Studies of the College of Phy. of Phila., June, 1948.

It is obvious that the control of rheumatic heart disease will be the most effective preventive measure for subacute bacterial endocarditis. Curiously the reverse of this is true, namely that rheumatic heart disease which progresses to severe mitral stenosis and auricular fibrillation is practically a one hundred percent guarantee of immunity from subacute bacterial endocarditis, as I pointed out in 1930.

Given a susceptible person, that is one with mild rheumatic heart disease, with mitral and aortic regurgitation, one may observe that there are certain precipitating events which commonly initiate subacute bacterial endocarditis, notably respiratory infections and dental extraction. Because of the bacteremia occurring with every dental extraction, even in normal individuals, it is wise to administer penicillin to every rheumatic patient before and just after extraction. We use either 200,000 units by mouth in two doses a few hours before extraction and two 50,000 unit doses after it; or the alternative method of 300,000 units in oil intramuscularly before extraction. There is a difference of opinion as to the economic advisability of this procedure and the dosage of the drug.

We may combine our thinking about rheumatic fever and subacute bacterial endocarditis in relation to penicillin and emphasize a freer use of this drug. At present I feel, in individuals with rheumatic heart disease, that following any respiratory infection, surgical operation, injury, or obstetrical delivery penicillin should be given. It should be controlled by throat cultures and continued, so long as haemolytic streptococci are found. This procedure is statistically of greater importance in preventing rheumatic recurrences, but the routine use of penicillin will probably also prevent invasion of the heart valves by non-haemolytic streptococci.

Perhaps a word of caution is needed to control enthusiasm for too widespread increase in penicillin prophylaxis. It is disturbing to note the development of the multitude of penicillin resistant strains of bacteria. This is becoming a very real problem in the treatment of staphylococcal diseases. It should make us more careful in studying the sensitivity of the particular streptococcus which we may be attacking with antibiotics, but even here there are peculiarities of growth of bacteria in relation to dosage of drug which are unsolved.

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Editorial

THE ACADEMY OF DENTISTRY, TORONTO

Annual Winter Clinic

by T. R. Marshall, D.D.S., Toronto, Ontario

"It is basically smart to lose a day at the office", said John Fisher, "If you use it to improve yourself."

Over 500 dentists in Toronto and from neighbouring cities did just that on November 25 when they took the day to attend the splendid meeting of this association.

Dr. E. A. White and his committee did a superb job on arrangements all the way from registration through a full day of lectures, clinics, visual education, demonstrations and exhibits. There was so much of interest to see and hear that the day passed all too quickly. But in addition to this fine scientific program which one naturally expects at a dental convention, there was something more. It was a challenging address by Mr. John Fisher of radio fame. It was so timely and apropos that it appeared to spark the whole meeting.

Mr. Fisher told his listeners around the luncheon table that it was essential to improve ourselves not only toward professional knowledge but toward life. He pointed out that so many of us living in this democratic country of ours are too complacent about confronting problems. People are quite conscious of their rights and privileges but what are they doing about sharing the responsibility of helping to preserve them. It is quite true, we make statements condemning things we do not like and that inter-

fere with our liberties but we stop there. We are too busy selfishly pursuing our way of self interest with little thought of contributing to the ideal we talk about as democracy. The speaker said, "What we need is to understand the meaning of real democracy. It is the greatest system in the world —the right of everyone to rise, the right to share and the right to think and practise the Golden Rule. Let us get belligerent about it. Let's sell it."

Somehow John Fisher's message is worth a second thought. To be sure his theme was democracy but for his dental audience it could easily have been the freedom enjoyed in the private practice of Dentistry. There are so many within the profession who would raise their voices in protest against socialized schemes of dental service. Is it because their liberty and privilege to pursue practice in self interest would be interfered with? Or is it because they believe the optimum application of dental care would not be effectively promoted, that quality of service would tend to deteriorate and that incentive to progress in dental science would be lost? The answer to both questions could be "yes" but if so the second question with three parts becomes personal for all of us. What am I doing now to advance and facilitate the optimum application of dental care, to improve the quality of my service to my patients and what contribution am I making for the progression of dental science? Undoubtedly many would pass this test with honours as indicated by the large membership in the Toronto Academy of Dentistry and other similar societies; dentists who are contributors and eager for knowledge. Yet it must be admitted that there are still some who are complacent about the whole matter and might feel more than a little embarrassed if asked "Why are you really opposed to socialization of dental services"?

Our leaders in the Canadian Dental Association are actively promoting a program to raise the standard of dental care. It consists of (*a*) educating the people to appreciate the health importance of good teeth and the value of early care (*b*) emphasizing and supporting dental research to improve our knowledge of effectively controlling dental diseases; (*c*) encouraging dentists in their regular practices to provide much needed conservation treatment particularly for children and young adults; (*d*) endeavouring to secure a more adequate distribution of dental care in the more rural communities.

This is a program of merit conceived for the purpose of giving leadership to professional action and public thinking. It will be realized in proportion to the genuine interest and support given the project by Canadian dentists individually and collectively. And indeed I have reason to believe that the spirit of achievement in this great professional purpose is beginning to catch on. Progress is slow and perhaps disappointing at times, which only emphasizes that this is no time for complacency and sitting back to let others do it. Every dentist can have an active part today by devoting more of his office time to providing needed dental health care for our children

and youth. Take care of the child's teeth until he is 20 and he has a chance of having good teeth for the rest of his life.

Of course our system of providing dental service has its faults, its freedom of action lends itself to exploitation and advantage, the catering to special classes, all of which leads eventually to discipline and loss of privilege. But our system is democratic permitting the right to rise in professional public esteem; the right to share the professional responsibility for advancement and its obligation to the people for service; and finally the right to "Think" how it can best be done according to professional altruism and the practice of the Golden Rule.

Is there anything better? If not let us become enthusiastic about it and share in the responsibility of preserving the best we know.

CORRESPONDENCE

An Appeal

To the Editor:

May I, as a Canadian graduate in dentistry, make a special appeal to all my colleagues in Canada!

As the British member of the Executive Council of *Secours Dentaire International,* I am only too well aware of the very great need that, at present, exists in Germany for dental journals, printed in the English language. Letters from that country confirm this.

My colleague, Dr. Fritz H. Witt, 33 Kolerstrasse, Nuremberg-Zabo (13A), Germany is acting as receiving-officer. He will gladly undertake to distribute all journals sent to him to the various universities, dental societies, etc.

Please address all literature direct to Dr. Witt, and not to me.

J. Menzies Campbell, F.R.S.E., D.D.S., L.D.S.,
14 Buckingham Terrace,
Glasgow, W. 2, Scotland.

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Dental Fees

In the January issue of the Cosmopolitan magazine an article appeared entitled "What Should Your Dentist Charge?" It was written by McLeod Morgan and purported to show that individual dentists do not agree in diagnosis and treatment planning and that fees charged vary widely among the profession. Mr. Morgan concluded that something should be done to have dentists make identical diagnoses and to have roughly the same fee schedules.

In reply the Bureau of Information of the American Dental Association sent the following letter to the Supervising Editor of Cosmopolitan Magazine.

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To the Supervising Editor, Cosmopolitan Magazine:

The article in your January issue entitled, "What Should Your Dentist Charge?" is grossly unfair to the distinguished profession of dentistry. It is surprising that a magazine of the standing of Cosmopolitan would publish such an article.

On the basis of a rather limited survey, the author, McLeod Morgan, comes to the glib conclusion that all dentists should make identical diagnoses and have roughly the same fee schedules. Mr. Morgan admits the weakness of his conclusions by his own defensive protests in the concluding paragraphs.

Every person, including dentists, must rely on his own judgment. There are differences of opinion in all fields of human endeavour, particularly in the highly complex health sciences. I cannot conceive that even Mr. Morgan believes that the acme of scientific knowledge has been achieved by man. It is to be expected that there should be variation in diagnosis and treatment planning by individual dentists just as there would be by physicians; just as there would be by any individual attempting to solve a problem whether he be a lawyer, an engineer or an editor. Different dentists use different methods in making examinations. It is granted that some are more thorough than others and there will be differ-

ent findings. This merely proves that individuals should have the right to select the dentist in whom they have confidence. It does not suggest that this free choice of practitioner should be eliminated.

It might be that such a "millenium" as envisioned by Mr. Morgan regarding fees could be achieved under a tightly regimented form of state medicine through which all physicians and dentists would work for the government. This may be the opinion of some individuals. It is not the opinion of competent dental authorities who have made more than a superficial study of the problem. Until that "millenium" of regimented government control of the health professions is forced upon the professions and the public, there will be variations in fees in different types of practice and in different areas. The patient will continue to have the right to choose a practitioner whose fees are acceptable to him. And the practitioner will have the right to charge fees which he believes compensate him for his services.

The record of the dental profession in the United States is one of outstanding health service to the American people. Nowhere in the world is the level of dental health as high as it is in the United States. Inadequacies exist in all fields of human endeavour. Dentistry has corrected many of its shortcomings in the past and will correct others in the future through education and self-discipline. The dental profession, however, has no intention of yielding the advances made under the system of private practice to Mr. Morgan's implied solution—the establishment of a system of regimented control of the nation's health services.

Signed—

Herbert B. Bain
Director
Bureau of Public Information of A.D.A.

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News Release on Impregnation

Impregnation Theory

In the January 3 issue of Colliers magazine there appeared an article dealing with the impregnation theory of Dr. Bernhard Gottlieb. The article says that the treatment has "been perfected and proved in the last few months." It is the opinion of the staff of the American Dental Association that this article is premature because of the lack of adequate supporting evidence and that it is unfortunate that the public is thus stirred up expecting a new "miracle" preventive of caries. The following is a news release issued by the Bureau of Information of the American Dental Association in reply to the article, which reaction has been transmitted to the editor of Colliers and the author of the article.

Recently published reports of an impregnation method of preventing dental decay developed by Dr. Bernhard Gottlieg of Baylor University (Dallas, Texas) have been described as "premature" by staff scientists of the American Dental Association.

An article in the current issue (Jan. 8, 1949) of Collier's magazine, described the treatment as "something which has been perfected and proved in the last few months."

It consists of treating the teeth with a variety of chemicals to wall off the tiny fissures in the enamel of the teeth which Dr. Gottlieb contends are the invasion roads for decay producing bacteria.

Staff scientists of the Association said that there is inadequate clinical evidence either to prove or disprove the claims of Dr. Gottlieb. They warned that until this supporting evidence is substantial there is danger of encouraging false hope in the minds of the 90 per cent of the nation's population subject to tooth decay.

They pointed out that they had no desire to discourage any research work but said that they questioned the wisdom of recommending treatments for the general public until such treatments are proved to be scientifically sound. Their statement continued:

"Future research will either substantiate or disprove Dr. Gottlieb's theory and the claims that he makes for the effectiveness of his treatment. But it is unfortunate that premature publicity has been given to a treatment for which so little scientific evidence is available.

"It is not prudent to make the claims that were made in the Collier's magazine article when they are supported only by clinical studies of 58 children and 12 others as a control group in one instance and 42 children in another experiment.

"Dr. Gottlieb presents a hypothesis about the aetiology of dental caries different from that accepted by nearly all dental histologists and pathologists. He has that right but others also have the right to question it."

Present Status of Preparations Used in Impregnation for Caries Prophylaxis

REPORT OF THE COUNCIL ON DENTAL THERAPEUTICS

(From The Journal of the American Dental Association, January 1949.)

Recently, commercial houses have marketed certain preparations for the control of dental caries by chemical impregnation of the tooth structure. Among these preparations is Impregnol, distributed by National Synthetics, Inc., in this country and by Bell-Craig, Ltd., in Canada. The principal basis for the use of these preparations is a theory of caries aetiology and prevention advanced by Gottlieb[1].

Impregnol consists of three separate solutions: Solution 1 contains benzene to remove "fatty adhesions"; solution 2 contains a 40 per cent zinc chloride solution and 1 per cent polyoxyalkalene sorbitan monolaurate as wetting agent; solution 3 contains 20 per cent potassium ferrocyanide with the same wetting agent as solution 2. Solution 3 is used to precipitate solution 2.

In his writings, Gottlieb has at times changed the recommendations for solutions to be used in his technique. During 1947 he recommended four different series of solutions. The first was a 1 per cent solution of Naccanol (a wetting agent) followed by 5 per cent silver nitrate and, for precipitation, a saturated solution of calcium chloride[2]. In his recent book Gottlieb changes the silver nitrate concentration from 5 per cent to 10 per cent. He now suggests as an alternative a 50 per cent solution of zinc chloride precipitated by a 10 per cent solution of zinc ferrocyanide[1]. In July 1947 he changed the percentages of these solutions to 40 per cent zinc chloride and 20 per cent zinc ferrocyanide, this to be preceded by petroleum benzin.

These preparations are based on the hypothesis that the initial carious lesion is primarily proteolytic in character and is aided by an invasion of micro-organisms into the lamellae or prism sheaths of enamel. If the hypothesis is correct, caries could be prevented by mechanical obstruction of these invasion roads. According to the theory, the use of the above drugs should obstruct the invasion roads. At present, their use is based on the premise that the caries hypothesis will be verified. Contrary to Gottlieb's theories is experimental evidence that the initial carious lesion is the result of an acid environment (decalcification) of the surface enamel [4-6].

The published data on the effectiveness of the preparations used for impregnation are limited to the work of Younger[7] and Lazansky[8]. Younger's data are inadequate from a statistical point of view, even though he found a reduction in the incidence of dental caries. The number of individuals used in his study was too small. Some unpublished work[9] involving another group of subjects supplements Younger's data. Lazansky found that Septochem failed to reduce the incidence of caries in hamsters. The Septochem preparations consist of three solutions: Solution 1 contains Naccanol, which reduces surface tension; solution 2 is an 8 to 10 per cent aqueous solution of silver nitrate; solution 3 is a sulphathiazole nitric acid mixture which is used to precipitate solution 2. It is the Council's understanding that the Septochem products are no longer marketed.

As far as the Council can ascertain, the effectiveness of preparations that have been suggested for use in impregnation has not been established. The Council will be pleased to receive further evidence concerning the value of these preparations and will modify its appraisal if their merit is scientifically established.

1. Gottlieb, Bernhard, *Dental Caries.* Philadelphia: Lea & Febiger, 1947, p. 230.
2. Gottlieb, Bernhard, Caries Phophylaxis. *Texas D. J.* 65:8 (Jan.) 1947.
3. Gottlieb, Bernhard, personal communication dated July 16, 1947.
4. Stephan, R. M., Intraoral Hydrogen Ion Concentration Associated With Dental Caries Activity. *J. D. Res.* 23:257 (Aug.) 1944. (For further references, see this article.)
5. Volker, J. F., An Outline of Caries Prevention. *J. New Jersey D. Soc.* 19:8 (Sept.) 1947.
6. Kronfield, Rudolf, *Histopathology of the Teeth and Their Surrounding Structures.* Second edition. Philadelphia: Lea & Fibiger, 1939. Pp. 112-116 and figs. 85-90.
7. Younger, H. B., Gottlieb's Caries Prophylaxis. *Texas D. J.* 62:429 (Dec.) 1944.
8. Lazansky, J. P., The Effect of Topical Septochem Applications on Experimental Caries. *J. D. Res.* 25:21 (Feb.) 1946.
9. Gottlieb, Bernhard, personal communication dated May 7, 1948.

The worst sin towards our fellow creatures is not to hate them, but to be indifferent towards them; that's the essence of inhumanity.—George Bernard Shaw.

BOOK REVIEWS

Handbook of Dental Practice, edited by Louis I. Grossman, D.D.S., Dr. med. dent., Assistant Professor of Oral Medicine, School of Dentistry, University of Pennsylvania. 417 pages, 267 illustrations. Published by J. P. Lippincott Company, Philadelphia, London, Montreal.

As the editor states this is a book primarily for the practising dentist. There is a chapter on most every important phase of dental practice, each written by an author recognized in his particular field and in many instances these writers are members of staff in American Dental Schools. Here are the names of a few of the co-authors of this book—Bibby, Volker, Stafne, Brodie, Orban, Burket, Archer, Cameron, Sweet and Trapozzano.

The book is divided into 2 parts: part one is devoted to diagnosis and treatment while part two is a manual of techniques used in restorative dentistry. It is difficult to single out any part of the book for special mention but the opening chapters are very appealing—"The Prevention of Dental Caries" and "Control of Dental Caries." The authors bring their readers up to date on this all important phase of the dental caries problem.

For the busy practitioners who do not have time for extensive study but would like to improve their knowledge in many branches of dental science, this is a very interesting book. Opportunity for more intensive reading is provided too in the splendid bibliography appended to each chapter.

The book is one that can be read very profitably by the general practitioner and it is nicely printed in very readable type.

T.R.M.

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Dental Caries — Mechanism & Present Control Technics, edited by Kenneth A. Easlick, A.M., D.D.S., Ann Arbor, Michigan, Professor of Dentistry (Dentistry for Children) in the School of Dentistry and Professor of Public Health Dentistry in the School of Public Health. 234 pages. Published by The C. V. Mosby Company, St. Louis, Mo. 1948. Canadian Agents: McAinsh & Co., Limited, Toronto. Price $5.50.

In September, 1947, an inservice training course was sponsored by the Public Health and School of Dentistry of the University of Michigan. Some 19 prominent individuals, for the most part dental caries research workers, participated in the lectures. The objective of the conference was to produce a critical summary of the information that is scientifically valid in the field of caries control. The lectures, with references, discussions and conclusions, are now presented in book form.

It is doubtful if so many authorities upon the important subject of caries control were ever brought together at any one time previously. Those attending the course were provided with library assistance and facilities in order to make an appraisal of the following six divisions of the subject: (1) The mechanism of the caries process, (2) the relationship of systemic conditions to the caries process, (3) the effectiveness of prophylaxis, toothbrushing, chewing gum, dentifrices, and mouthwashes, in the control of caries, (4) the utilization of fluorides and silver salts in the control of caries, (5) the relationship of ingested vitamins and minerals to dental caries, and (6) the contribution of various types of diet to caries control.

The presentations made were critically analyzed by the participants at the meeting, who consisted of a group of 114, representing —private dental practice, public health practice, dental research, health education, dental education, biostatistics, nutrition, bacteriology, biochemistry and pediatrics. The result is a sifting down of scientific and known facts respecting dental caries. Too often the repeated myth becomes thought of as fact, even by members of the profession. The publication of this book fills a great need in that a valuable source of scientific data is provided for all.

To this reviewer the presentation emphasizes the great existing need for intensified research in the dental caries field. Without doubt, there is more active dental caries research in progress now, than at any other preceding time, which is most creditable. This publication records the known facts of today. It would appear a laudable project to have such a conference repeated at suitable intervals and a definite record of progress thereby tabulated.

The general practitioner will find in this book a most useful reference, particularly

during these days when the public press is carrying so many articles upon the subject.

D.W.G.

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Oral Histology and Embryology by Frederick Bogue Noyes, D.D.S., Sc.D., F.A.C.D., Professor of Histology, Northwestern University Dental School, 1896-1918. Professor of Histology and Orthodontia, College of Dentistry, Univ. of Illinois, 1914, Dean 1927. Sixth edition, edited and revised by Isaac Schour, B.S., D.D.S., M.S., Ph.D., Sc.D., Professor of Histology and Head of Department and Associate Dean, University of Illinois, College of Dentistry and Harold Judd Noyes, B.S., D.D.S., M.D., Professor and Head of the Dept. of Orthodontia, College of Dentistry, North Western University, 1940-1946; Professor of Dentistry and Dean of the Univ. of Oregon Dental School 1946. 443 pages, 284 illustrations and 15 plates, 11 in colour. Published by the Macmillan Company of Canada. Price $7.30.

This book is an inventory of today's accepted knowledge on this subject and should be used as an aid in acquiring knowledge. Positive statements have only been made after many years of study and yet the authors point out that tomorrow's facts may make it necessary to change their minds.

The authors also point out that as long as oral diagnosis is practised prior to treatment and treatment is based on understanding or normal development, and normal histologic structure, oral histology will remain an essential part of the practice of dentistry; that discovery continues every day and that oral histology will continue to contribute significantly to and will aid in the establishment of those biologic principles that form the basis of intelligent dental practice.

This is a vital and interesting subject and the material is splendidly prepared by men of international reputation so without question this book can be recommended for perusal.

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

Doctor J. G. Andrews of Toronto, Ont., has been appointed to the Corps, effective 28 Oct. 48, in the rank of Captain, and posted to R.C.A.F. Station, Toronto, Ont. Captain Andrews was graduated from the University of Toronto in 1941, and immediately accepted a commission in the C.D.C. He served both in Canada and Overseas and was transferred to the Supplementary Reserve in December 1945.

Doctor J. L. Craig of Peterboro, Ont., has been appointed to the Corps, effective 26 Nov. 48, in the rank of Captain and posted to R.C.A.F. Station, Trenton, Ont. Captain Craig was graduated from the University of Toronto in 1946, having been a member of the Services during his final university year. Following his release from the Service in 1946, Captain Craig completed two years post-graduate studies in maxillo-facial and general dentistry at the University of Chicago.

Doctor C. G. B. Grant of Durham, Ont., has been appointed to the Corps, effective 10 Nov. 1948, in the rank of Captain. Captain Grant was graduated from the University of Toronto in 1940, and was appointed to the C.D.C. in October of that year. He saw service in Canada, United Kingdom, Italy and Northwest Europe, and was transferred to the Supplementary Reserve in December 1945.

Captain L. C. Cameron of Halifax has recently been promoted to the rank of Major. Major Cameron was graduated from Dalhousie University in 1932 and practised in Lawrencetown, N.S. until his appointment to the C.D.C. in December 1939. He served in Canada, United Kingdom, Italy and Northwest Europe, and was transferred to the Supplementary Reserve in February 1946. He was reappointed to the Corps in October 1947 and is stationed at Halifax, N.S.

Major R. S. Kinney, who has been Senior Dental Officer at Fort Churchill, Man., for the past two years, has been posted to HMCS "Stadacona", Halifax, N.S.

Major O. W. Crummey, who has been stationed at R.C.A.F. Station, Dartmouth, N.S., has been posted to Fort Churchill, Man., as Senior Dental Officer.

Major T. L. Marsh of The R.C.D.C. School, Ottawa, is attending the Advanced Dental Course at The U.S. Army Medical Department, Research and Graduate School, Walter Reid Hospital, Washington, D.C. This is a 16 weeks' post-graduate course designed to cover recent advances in dentistry and providing advanced instruction in the dental sciences.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

Health Insurance Issue in United States

On December 1st in secret session, the House of Delegates of the American Medical Association voted a special assessment of $25.00 per member to fight government control of health programs. The A.M.A. is absolutely opposed to the introduction of compulsory health insurance. The surprising result of the recent election in United States has been interpreted as a mandate to proceed immediately with the introduction of a health insurance measure. A new compulsory health bill is now being prepared for introduction at the coming session of congress which begins next month. Both the leaders of the A.M.A. and the A.D.A. are marshalling all their forces for an all-out battle when health insurance is brought up in Congress.

It is anticipated that in the cabinet shuffle at Washington a new department will be created to be known as "human relations" and it is probable that Oscar R. Ewing, at present social security administrator, will be appointed head of the department with cabinet position. Ewing recently issued a report to the President entitled The Nation's Health, in which he stated that "We are set to go on the most comprehensive program of health that has ever been offered to the people of the United States . . ."

At the Annual A.D.A. Session in Chicago last September the House of Delegates reiterated opposition to compulsory health insurance and expressed disapproval of the Ewing Report in which he recommended the adoption of compulsory health insurance. The present situation in the United States has given reason for Dr. Carl O. Fiagstad, Chairman of the A.D.A. Council on Legislation to issue the following statement:

> "The results of the election, unfortunately, have engendered a spirit of defeatism within the profession regarding the ability to prevent the enactment of compulsory health insurance legislation. This attitude is detrimental to the success of our cause and is not warranted on the basis of past experience with this type of legislation. The opposition of the health professions to compulsory health insurance bills during the ten years they have been before Congress has had a wholesome effect upon the Congressmen . . . Although the administration has indicated it favours the enactment of this legislation, many of the Congressmen in both parties are vigorously opposed to it. They will not accept the philosophy of regimentation . . . It undoubtedly will be rough going in the 81st session on this legislation but our cause is far from lost."

Note: Copy of The Nation's Health by Oscar R. Ewing may be obtained by writing Superintendent of Documents, U.S. Printing Office, Washington 25, D.C. Price: $1.00.

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Comment on British State Dentistry

The following article appeared in the newsletter entitled Industry, as published by The Canadian Manufacturers' Association—December 1948.

"Now that Britain's teeth have been practically 'nationalized' by Mr. Aneurin Bevan's National Health plan, there are a lot of happy dentists filling and drilling away in the mouths of Old Country citizens.

They've hit the jackpot and, for those dentists who now get nearly twice as much from the state for looking after people 'free' as they did under the old system, Mr. Bevan is assuming the stature of Saint Nicholas.

What's more, Britons who thought little of the conditions of their molars when they had to pay for treatment directly and who only went to a dentist when a tooth began to sing are now queuing up at dental offices in such crowds that surgeries in industrial areas are remaining open until 10.30 p.m. to cope with them. Even the planners themselves are amazed.

It's not that the Britishers didn't know their teeth were not good. As far back as the summer of 1938, Mr. Walter Elliott, at that time one of the Conservative Government's ministers, said at a public gathering: 'The teeth of this nation are rotten.' But in those days they had to foot the bills themselves; there was no socialistic set-up to write off the costs.

All this sounds rosy, but—and there always

seems to be a 'but' where this type of planning occurs—not all dentists are happy. Nearly 40 per cent of England's dentists have refused to join the Bevan plan and they have their reasons.

First, they say, the rush may result in a lot of belt-line production because the National Health plan dentists are trying to treat too many patients in too short a time. They say it's hard work to handle more than 15 or 18 people in a day without it becoming a drain on their own health. Now some of them are whipping 30 patients a day through their offices.

Second, the objectors are afraid that the profession will be slapped down to a purely utility level. Mr. Bevan's eventual idea, they argue, is a system of state dentistry with the dentist merely a salaried servant and they're not too happy about that.

And here is the last and most important 'but'. The original plan estimated that free dental service would cost about £7,000,000 a year, but if the current rush continues it will cost at least £35,000,000 a year. That is $140,000,000 in our language! Where is all this money coming from? You guessed it the first time—right out of the taxpayers' pockets!"

NEWS FROM THE PROVINCES

SASKATCHEWAN

Moose Jaw Dental Society

The December meeting of this Society had as its main object the presentation to Dr. A. E. Chegwin of a cigarette case and lighter upon his leaving the city for Regina, where he is now located as Director of Dental Services.

Dr. Chegwin had practised in Moose Jaw since 1919 and had at all times given the Society valuable support and advice, as well as having served two consecutive years as its President.

The good wishes of the meeting were extended to Dr. Chegwin in his new position.

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Saskatoon Dental Society

The regular dinner meeting of this Society was held in the Bessborough on January 11.

As the topic of the forthcoming convention is uppermost in the minds of all dentists these days, considerable discussion took place as each committee chairman gave his interim report. Three luncheons, a dinner and a banquet and dance are included in the program, and Bessborough meals come high these days. However, all legitimate convention expenses are deductible for income tax purposes so for the first time nobody will feel it hard to attend. Three top essayists have been secured, as well as a good group of clinicians.

The main speaker of the evening was our new Director of Dental Health for the Province of Saskatchewan—Dr. A. E. Chegwin, formerly of Moose Jaw.

He stressed the fact that Preventive Dentistry was his main preoccupation. A film,

Copy of Oil Painting by Dr. V. Rondeau of Rouleau, Saskatchewan

"Something to Chew On," was shown and Dr. Chegwin stated that it was available for use by schools, service clubs, etc. He touched briefly on the dental services being rendered to the wards of the government, but reiterated again and again that prevention must be stressed in every way.

MANITOBA

Manitoba Dental Association

The Board of Directors of the Manitoba Dental Association has two new members as

the result of the annual January election of three members for a term of two years. They are Drs. J. M. Grahame and W. J. Riley, both of Winnipeg. Dr. Paul Cleave who has been on the Board for eight years was re-elected and is now President of the Board. Dr. K. M. Johnson is the new Vice-President. Dr. J. F. Morrison, after 28 years as a Board member, retired at this time from the duties of a Director and was appointed permanent Secretary-Registrar and Treasurer.

Drs. H. J. Merkeley and A. E. Proctor were re-appointed as representatives to the Canadian Dental Association and the Dominion Dental Council respectively and Dr. Morrison as an alternate delegate for both representatives.

Among the half dozen committees appointed for the current year was one to study the problem of procuring dental education for applicants who are unable to secure admission to existing dental schools. If a practical solution can be arrived at the committee will deserve the undying gratitude of the rural population of this Province. At the present time the species of genus homo known as the country dentist is gradually becoming extinct.

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Winnipeg Dental Society

It is always a pleasure and satisfaction to have a member of the staff of the Mayo Clinic to lecture to the dental profession anywhere and the appearance of Dr. Edward C. Stafne before the Winnipeg Dental Society at afternoon and evening sessions to talk about Dental Roentgenogram Diagnosis was sufficient to make the January meeting one of the highlights of the winter's program.

A dentist who was in practice before the arrival of the roentgenogram on the scene can be forever grateful to Professor Roentgen for his scientific research and to men like Dr. Stafne who assist us to read correctly what is visible in the radiogram.

Both sessions were attended by large audiences. The membership of the Winnipeg Dental Society is larger every year but not all the Winnipeg dentists have ever joined as yet and it is desirable for their own interests that they should all take advantage of these refresher opportunities.

The president of the Society, Dr. Ivan Jackson, presided. J.F.M.

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Dental Nurses' and Assistants' Association

Dr. Kenneth M. Johnson addressed this Association January 10. He gave an inspiring review on being an alert and efficient D.A.

FLORENCE JEFFREY

ONTARIO

Dr. Stanley J. Phillips Honoured in Oshawa

In appreciation for outstanding services rendered the city of Oshawa, the Board of Education presented our hard working colleague "Stan" Phillips with an illuminated address, at its December meeting. The text of the scroll follows:

"It is the desire of the people of Oshawa that meritorious services on their behalf shall be recognized. As the trustees of the citizens, the Board of Education of the year 1948 desire to record their appreciation of your services extending over a period of more than sixteen years . . . during these long years of endeavour, the citizens of Oshawa have been well served and their educational affairs have been ably administered . . . we are happy beyond expression to record the sincere thanks of a grateful citizenry . . . through your efforts our educational system has developed and prospered . . . this success has been at-

ANNOUNCEMENT

Ontario Dental Association Convention

The eighty-second Convention of this Association will be held at the Royal York Hotel, Toronto. The Convention commences May 15 with a Reception and Musicale. The Program for May 16, 17 and 18 includes Group Clinics, Table Clinics, Essays, Visual Education, and the Exhibitors' latest displays.

For further information contact the Secretary, 86 Bloor Street West, Toronto 5, Ontario.

Right to left front row: Dr. J. A. MacFarlane, Dean, Faculty of Medicine; Professor R. V. Bradlaw, Dean, Faculty of Dentistry, Royal College of Surgeons, England; Dr. Harvey W. Reid, President, Board of Royal College of Dental Surgeons, Ontario; Dr. Sidney E. Smith, President, University of Toronto; Dr. Roy G. Ellis, Dean, Faculty of Dentistry, Toronto. Back Row: Drs. E. A. Grant, T. R. Marshall, P. G. Anderson, Wallace Graham, R. P. Lowery, C. H. M. Williams, H. K. Box, R. J. Godfrey and D. W. Gullett.

tained to a large degree by a generous contribution of your time and effort . . . you have seen Oshawa develop from the status of a town to an industrial city, and your vision and initiative have kept this phase of our public affairs abreast of the city's advancement.

"May God grant that you may long continue to enjoy good health and happiness in this city, to which you have given so many years of outstanding leadership."

Congratulations Dr. Phillips on this well merited recognition.

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Toronto Study Club Dental Technicians

The December meeting of the Club took the form of a Christmas bowling tournament. It is an annual event devoted to fun and enjoyment. Winners were Messrs. Posen, Elliott, Waters, Avery, Mitchell and Furrie.

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Distinguished British Dental Surgeon Visits Toronto

Professor Robert V. Bradlaw, F.D.S., M.R.C.S., Eng., L.R.C.P., London, paid a three day visit to the Faculty of Dentistry here in January. He is on tour studying graduate dental education in Canada and the United States, a mission sponsored by the Nuffield Foundation. Prof. Bradlaw is a graduate of Guys Hospital London and holds high rank as an educationist. At present he is Dean of the School of Dentistry, University of Durham, Newcastle-upon-Tyne and also Dean of the newly created Faculty of Dentistry of the Royal College of Surgeons of England.

Prof. Bradlaw's special study is Oral Pathology and in this connection he is a recognized authority. In his school he has one of the finest collections of coloured photographs and specimens of pathologic lesions occurring in and about the Oral Cavity that is to be found anywhere in the world. These are excellently classified and displayed for ease in reference and study.

However important the Academic achievements of this accomplished visitor he has other qualities that make him a welcome guest to Toronto. At a little dinner in his honour sponsored by the Board of the Royal College of Dental Surgeons of Ontario, he displayed some of his humour, geniality and charm that is welcome in any party. Yet behind this one observes something of the indomitable spirit that typifies the British people. We are told when you visit Britain in these days you find every courtesy, and abounding hospitality almost to the point that all is well. The austerity of living conditions is made not too apparent as these grand people move on successfully to achieve better times. This attitude is a challenge and as one

spokesman put it—"I want to be ever loyal to such a breed of men."

It is good for Canadians to visit with such colleagues from the "Home" land and learn from them something of the deep affection held by those across the Atlantic. Dr. Harvey Reid and Dr. Don Gullett who arranged the gesture of hospitality to Prof. Bradlaw are to be commended for this thoughtful tribute.

QUEBEC

Montreal Dental Club

The 51st annual meeting of this club was held on December 13 at the R.C.A.M.C. and R.C.D.C. officers' mess. Dinner preceded the business session. Highlights of the year's activities of the club were reviewed by the retiring president Dr. J. W. Abraham. Reports of the secretary, Dr. R. F. Harvey and treasurer, Dr. W. H. Boyles showed that the club had enjoyed an unusually active and successful year. Dr. M. L. Donigan reported on the 24th Annual Fall Clinic held in October which was unanimously voted the best one yet.

Officers elected for 1949 are as follows:

Honorary President ..... Dr. J. W. Abraham
President ..... Dr. A. D. Richardson
President-elect ..... Dr. S. A. MacSween
Secretary ..... Dr. R. F. Harvey
Treasurer ..... Dr. W. H. Boyles
Historian & Archivist ..... Dr. C. C. Bourne
Executive Committee: Drs. W. G. Leahy, M. A. Rogers, E. S. Dorion, F. O. Frederick, D. W. Henry and H. L. Mussells.

NOVA SCOTIA

Halifax Dental Society

Two dinner meetings of this Society have been held at the Nova Scotian.

At the November 25 meeting the speakers were Drs. Bagnall and Dobson, who discussed the topical use of fluoride solutions. Dr. Bagnall spoke on "The Historical and Theoretical Background," and Dr. Dobson spoke on "The Technique of Application."

On January 6 the clinician was Dr. John Merritt, Lecturer on "Ceramics" at Dalhousie. He by the use of models demonstrated the tooth preparation dividing it into two stages and discussed all steps and phases of construction.

These clinics and discussions proved very interesting. W.C.O.

BRITISH COLUMBIA

Victoria Dental Society

This Society will have as its guest speaker for February, Doctor J. Pettit, of Portland, whose topic will be "Major Surgery of the Mandible." Doctor Pettit will be well remembered by many graduates of the College who are practising in Victoria.

Vancouver and District Dental Society

This Society initiated proceedings for 1949 with another well attended meeting on January 4. A group of clinicians from Vancouver and New Westminster presented five subjects, which were apparently of more than average interest to the assembled members. Doctor G. M. Jinks showed and discussed a well prepared series of models demonstrating the construction and use of practical space maintainers. Doctor Murray MacDougall found many of the members much interested in the technical details of the spheno-palatine injection. An excellent presentation on the handling of third molar impactions was given by Doctor H. Simmons. Doctor Simmons promises well as an outstanding clinician on Oral Surgery. The McGrane technique in denture construction was well demonstrated by Doctor Frank Kenny of New Westminster, who had a very fine collection of models to illustrate his discussion. Doctor Bob Scharff demonstrated and spoke on the various methods of caries control now receiving so much attention among the members of the profession.

The program, under the direction of Doctor Lloyd Jacobson of New Westminster, was well balanced, and many of those present commented upon the excellence of the work prepared by these local clinicians.

Oregon Dental Meeting

More evidence of the close co-operation of dental groups along the Pacific Coast comes to light in the invitation just received from the Oregon State Dental Association. All officers and members of the British Dental Association are invited to attend the annual state meeting to be held in Portland, Oregon, on February 28, March 1 and March 2. This offer calls for registration, without fee, of all members who hold the card of the Canadian Dental Association.

Dr. Campbell Loses Life

Doctor L. R. Campbell of Mission, British Columbia, lost his life as a result of a fire in the building in which he lived. He was unable to escape from his apartment, and suffocated before he could be rescued.

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Victoria Dental Assistants

Victoria Dental Assistants gathered at the Department of Veterans Affairs Hospital for their January meeting. A demonstration was given on x-ray equipment and technique.

ALBERTA

Calgary Dental Society

The December 13 meeting of this Society was held in the Sun Parlor of the Palliser Hotel. Members and their wives gathered together, on this occasion, and spent a most friendly and enjoyable evening.

The speaker was Mr. Dan McCowan F.Z.S., distinguished and internationally famed naturalist of Banff, Alberta. He presented an awe-inspiring talk entitled "Snow Peaks and Flower Meadows of the Canadian Rockies," illustrated with one hundred and fifty Kodachrome slides.

Seldom, if ever, has the Calgary Dental Society been so fortunate as to have such an interesting and entertaining speaker. Dr. E. R. Upton thanked Mr. McCowan on behalf of the Society.

At the January 10 dinner meeting of this Society held in the Pallister Hotel, "Children's Dentistry" was the subject of a comprehensive and interesting talk by Dr. William Orobko of Edmonton. Dr. Orobko, a member of the Faculty of Dentistry, University of Alberta, had a grand selection of slides with which to illustrate his topic.

A fine turnout of members expressed its appreciation of an excellent presentation by a young man who is doing much to encourage preventive dentistry as it applies to children.

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Edmonton and District Dental Society

At the January 4 meeting of this Society, held in the MacDonald Hotel, the business consisted of hearing the Annual "Beefs" of the various members. This is an annual meeting to hear and discuss any grievances that any member wishes to bring up. Strange to say there were hardly any "Beefs" which shows that Dentistry in this district is in a very healthy state. There was a short discussion on "Fees" led by Dr. J. C. Ward but there was no official action taken on the matter. Dr. R. A. Rooney gave the history of the inception of the relationships between certain dentists and the laboratories from a political angle, and this seemed to be news to many who were there, but all were satisfied with the explanation. There were 64 members present. W.E.A.

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Edmonton Dental Nurses' & Assistants' Association

The December meeting of this Association took the form of a cocktail party at the apartment of the President, Miss Rogers.

The object was to get the members together to pack a Christmas hamper for a needy family. All the girls responded well with donations for it and a very pleasant evening was spent. JEAN CAMPBELL

EMPIRE NEWS

GREAT BRITAIN

Copy of Letter sent to Patients by Prominent British Dentist

In order to clarify my position with my patients, I should like to state that I am not participating in the new National Health Service.

Instead, I shall continue to conduct my dental practice entirely on a personal contract basis, thus maintaining the pleasant professional relationships, which have, hitherto, existed between my patients and me.

I am, fundamentally, opposed to being compelled to submit the details of treatment, which I may recommend (and which my patients may desire), to any State-appointed board for approval or rejection: a procedure necessarily entailing considerable irritating delays.

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The Limitation of Earnings

The Minister of Health has announced that he intends to make a regulation to provide that when payments to a dentist in excess of £400 per month are authorized by the Dental

Estimates Board the amount paid will be reduced by half the excess. This decision of the Minister will be resented by the profession, since it is in effect an arbitrary alteration of the operation of the scale of fees put into force without previous negotiation with the profession and because, from its very nature, it is bound to operate unfairly between members of the profession who may be affected by it. It is common knowledge that the greater part of the new demand created by the Health Act has been in respect of the supply of dentures. This has upset the normal balance of practice, with the result that the ratio of prosthetic work to operative treatment is, for the time being, different from that assumed when the scale of fees was settled. An extreme example will serve to illustrate the possible effect of this disturbance on the relation of gross fees to actual remuneration. On the basis adopted in working out the scale if a practice consisted wholly of operative treatment a gross turnover of £3,030 ought to yield a net income of £1,780, whereas if the practice was wholly prosthetic the turnover needed to produce the same remuneration would be £5,560. With these figures in mind it is easy to appreciate that any increase in gross turnover brought about by an abnormal demand for dentures will not be reflected in a proportionate increase in net remuneration. It has, moreover, to be borne in mind that this same factor applies to hours of chairside work in excess of the 33 per week on which the recommendations of the Spens Committee were founded. And there can be but few dentists in the Health Service who are not working longer hours than those in an endeavour to meet the demands made upon them by the public. Even if there had been no alteration in the assumed ratio between the two branches of practice an increase of approximately 25 per cent over the Spens' hours would raise the expected gross turnover to £4,800 per annum and, as we have shown, any marked increase in prosthetic treatment would produce a still higher figure. It is clear, therefore, that the imposition of an arbitrary limit designed presumably to check the exploitation of the scale by a small minority of dentists will inevitably inflict a measure of injustice on other dentists who are working long hours in an honest endeavour to meet a public demand. And it must be remembered that the Spens Committee expressly visualized that a certain number of dentists would be willing and able to work more than 33 hours per week and so earn remuneration in excess of the sum fixed as appropriate to those hours of work. Until the precise terms of the regulation are published it is impossible to know how it will work in respect to partners and dentists employing assistants. It can, however, be said at once that since the regulation is to be applied to all payments made after January 1, it constitutes not only an arbitrary alteration of the scale of fees but, what is more repugnant to British tradition, a unilateral revision of the terms of contracts which have been completed. The profession has no desire to condone abuses but it has a right to be consulted before the terms on which its members entered the scheme are varied. That right has been flouted.—Br. D. Jour. Dec. 17, 1948.

GENERAL NEWS

A.D.A. Officials Reiterate All-Out Opposition to Compulsory Health Insurance; Plan Drafted For Expanded Public Information Program

Plans for an expanded, nation-wide information program concerning dentistry's basic opposition to a national system of compulsory health insurance for the dental profession were endorsed by a number of A.D.A. officials and council chairmen at a special meeting in Chicago Dec. 29. The meeting was called by the Council on Legislation to review its plans for an all-out campaign in Congress to oppose enactment of the national compulsory health insurance plan being advocated by Federal Security Administrator Oscar R. Ewing and other federal government officials.

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New Editor for Journal of Oral Surgery

Dr. Reed O. Dingman, Ann Arbor, Associate Professor of Oral Surgery at the University of Michigan, has been appointed editor of the Journal of Oral Surgery to succeed Dr. Carl W. Waldron, Minneapolis, effective Jan. 1, 1949.

Novel Dental Health Education Recordings by Bob Hope, Bing Crosby And Other Hollywood Stars Are Now Available Through A.D.A.

The new series of dental health education recordings featuring the voices of Bob Hope, Bing Crosby, Cornel Wilde, Robert Taylor, Amos 'n' Andy and Tony Martin are now available for distribution through the A.D.A. The recordings were prepared under the direction of the Southern California State Dental Association and have been made available by that A.D.A. constituent for national distribution. The new series consists of six recorded programs, each containing dental health information presented in a highly entertaining manner. The records are appropriate for use in schools, by Parent-Teacher Associations and other community groups. Accompanying each album will be a set of graded teaching booklets for use in schools. The albums cannot be used for radio broadcasting. The series, consisting of six recordings on three unbreakable 12 inch records, complete with album and booklets may be purchased for $15.00 through the A.D.A. Order Department, 222 East Superior Street, Chicago 11, Ill. The purchase price includes shipping and handling costs.

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U.S.A. Administration Leaders Introduce Compulsory Health Insurance Bills in Both Houses of Congress — Truman Urges Quick Action

Health problems in the U.S.A. will receive considerable attention from the 81st Congress if the number of proposals advanced by Congressmen during the first two weeks of the new Congress can be interpreted as an accurate barometer of things to come.

Three bills call for extensive dental health services under compulsory insurance. Theoretically, all types of dental services would be available although a provision is included authorizing a five-member National Health Insurance Board to limit or modify services where personnel, facilities or funds are inadequate to provide all services. The board also is authorized to establish "standards" for specialist service. The dental services which theoretically would be available are listed as: "(1) general dental services rendered by a dentist engaged in the general practice of dentistry, including preventive, diagnostic and therapeutic care, and periodic dental examinations; and (2) special service rendered by a dentist who is a specialist in the class of services rendered . . . Such services may be rendered at the office, home, hospital, or elsewhere, as necessary." In addition, the bills propose to provide general medical care, home-nursing service, hospitalization, laboratory service, x-rays, eyeglasses and other related health services. Proponents of the measures claim it will cover 85 per cent of the population. Indicating the seriousness of the administration's effort to get compulsory health insurance enacted, President Truman included an item of $15,000,000 in his budget request to get the program in operation. In asking Congress for this appropriation, the President declared: "National health insurance is the only workable way to assure that all individuals have access to the medical care they need. I recommend the enactment of such a program this year." Signs that increasing opposition of the health professions to the program was being felt by Congress were seen in the general non-committal attitude of most Congressmen questioned on the course of action they will follow regarding the new bills. Few were willing to commit themselves either way during the early days of the current Congress.

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A.M.A. Reaffirms Stand on Prepayment Plans

The American Medical Association, at its Interim Session in St. Louis, made the following statement of policy regarding prepayment insurance plans:

"The American Medical Association reaffirms its belief in the application of the principle of medical care insurance on a voluntary basis. The American Medical Association has encouraged and assisted the development of voluntary prepayment plans. Coverage is now provided throughout the country and protection is being extended rapidly to an ever increasing proportion of our population.

"The American people now enjoy the highest level of health, the finest standards of scientific medical care and the best quality of medical institutions thus far achieved by any major country of the world.

"The great accomplishments of American medicine are the result of development by a free profession working under a free system, unhampered by governmental control.

"The experience of all countries where government has seized control of medical care

has been progressive deterioration of the standards of that care to the serious detriment of the sick and needy.

"The American medical profession is unalterably opposed to the institution of any system of medical care which would result in damage to the American public. Our carefully considered opinion is that any scheme of political medicine would be a catastrophe for the American people.

"Compulsory sickness insurance, notwithstanding misleading bureaucratic propaganda, is a variety of socialized medicine or state medicine and possesses the evils inherent in any politically controlled system. It is contrary to American tradition, and is the first and most dangerous step in the direction of complete state socialism. The American Medical Association rejects any such scheme as a method of the distribution of medical care. We are equally certain that when the people understand the facts they also will reject it with the same finality.

"On the basis of experience, we are convinced that voluntary medical care insurance, with the continued support of the American medical profession, can and will solve the economic problem of the distribution of medical care within the existing framework of private enterprise.

"It has been demonstrated that voluntary method provides a better and less costly service and avoids imposition of enormous taxation.

"The continuing purpose and determination of the American Medical Association is to maintain and improve the standards of medical care and to make that care available to all our people." F. Rev of Chicago D. Soc.

$60,000 Allotted to Caries Research at Cleveland

A $60,000 program to study the prevention and control of caries has been established jointly at Cleveland's Western Reserve University School of Dentistry and Babies' and Children's Hospital.

The funds for the three-year program were granted by the Beaumont Foundation, the Elizabeth Severance Foundation and the Cleveland Foundation.

•

Neglect of Children

A majority of American parents are guilty of marked neglect of the dental health of their children. In addition, only one person out of five follows his dentist's advice and has a dental checkup semi-annually and brushes his teeth three times daily.

These conclusions on dental health habits of American people were reported in the Journal of the American Dental Association by Dr. J. M. Wisan and Dr. Allen O. Gruebbel.

The conclusions were based on a recently-completed survey of 2,205 families representing a cross section of the American population. They found that the 3 to 9 age group was the most neglected.

About one-fourth of the respondents reported using toothpicks and chewing gum, in addition to tooth-brushes, to clean their teeth. Others said they used such things as washcloths, kitchen cleanser, cotton, olives and calcium tablets for oral hygiene.

Despite constant prodding by dentists and health educators on the importance of visiting a dentist at least twice a year, only 20.4 per cent of the persons reporting had followed this advice during the preceding two years.

IN MEMORIAM

James H. Mitchell of Saskatoon, Saskatchewan, aged 57, died December 27.

He commenced practice in Watrous and moved to Saskatoon 28 years ago.

Always interested in civic work Dr. Mitchell, was a past president of the Saskatoon Gyro Club, of the Figure Skating Club and of the local branch of the Fish and Game League. He was an enthusiastic gardener and a member of the rose and gladiolus societies.

Dr. Mitchell is survived by his widow, a brother, and a sister.

John Harold Scott of Orillia, Ontario, aged 60, died January 5. He was graduated from the Faculty of Dentistry, University of Toronto and practised in Hamilton for 25 years before moving to Orillia 7 years ago.

He was an active member of the Masonic Order and had obtained his 32nd degree. He was a member and on the Board of Managers of St. Andrew's Presbyterian church.

Dr. Scott is survived by his widow, two sisters and a brother.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 FEVRIER, 1949 NO 2

Les granulômes pulpaires ou pulpômes*

(essai de synthèse clinique, radiologique et histologique)

par MAURICE BOUYSSOU, Dr Méd. Stom., Toulouse, France.

(suite et fin)

Entre autres singularités, on peut voir sur la radiographie (fig. 12) que la chambre et le canal pulpaires de cette dent étaient réunis en une vaste cavité aux parois très minces, l'ensemble offrant en tout l'aspect d'une coquille. Sur la face distale de la couronne se trouvait un foramen qui donnait accès dans cette cavité intérieure à peu près vide.

Le schéma général montre que la surface de section est occupée en majeure partie par la cavité interne, qui s'étend presque jusqu'à la région apicale, où persiste encore une très courte portion du canal radiculaire primitif.

Cette cavité comprend deux parties distinctes:

La partie coronaire est à peu près vide; on n'y trouve plus que quelques vestiges. de tissus mous nécrotiques, où nulle structure organisée n'est reconnaissable. La cavité est ouverte du côté distal par une large échancrure qui a sans doute permis l'infection secondaire du tissu pulpaire hyperplasié, dont les débris nécrosés ont ainsi pu s'éliminer au dehors.

La partie radiculaire de la cavité, qui revêt la forme d'un entonnoir, est par contre comblée par une masse compacte de tissu conjonctif (fig. 13). Elle est constituée par un feutrage fibrillaire dont la trame est dissociée et infiltrée d'oedème. Quelques images de sections vasculaires aplaties parsèment ce tissu, au sein duquel apparaît une *plage osseuse néoformée,* de forme globuleuse, aux contours arrondis.

Cette masse conjonctive est dépourvue de liséré odontoblastique, ses bords sont directement au contact de la paroi d'ivoire et contractent avec elle une adhérence intime (qu'une distorsion accidentelle a rompue sur notre préparation).

La lisière de ce tissu qui regarde la cavité coronaire est bordée de polynucléaires dégénéres, rassemblés en petits amas purulents. Ces éléments leucocytaires témoignent d'une réaction locale de défense contre l'infection permanente dont la cavité coronaire est le siège.

La surface extérieure de la racine est recouverte d'une couche de cément

FIG. 12

♂ 15 ans, G^{111}
Granulôme pulpaire de la canine temporaire,
Follicule surnuméraire,
Canine permanente incluse

*Cet article a débuté dans la livraison de janvier 1949.

FIG. 13
C, tissu conjonctif en voie d'organisation
V, sections vasculaires
B, néoformation osseuse
D, ivoire
A, artefact (distorsion de la préparation)

d'épaisseur normale, l'apex seul a subi une légère résorption.

La paroi interne de la racine, qui borde la masse de tissu conjonctif, est formée d'ivoire normal, dont les tubuli sont régulièrement disposés. On ne trouve nulle part trace d'ivoire secondaire.

Vers la région coronaire, le vide de la cavité centrale est bordé par une paroi de structure complexe, divisée en deux couches distinctes (fig. 14). La plus externe est l'ivoire normal, où l'on trouve des tubuli rectilignes et réguliers. La couche interne est constituée par une structure voisine de celle de l'os, comparable à du cément secondaire; on y trouve des éléments cellulaires ovoïdes, inclus dans une gangue calcifiée qui s'est colorée intensément par l'hématoxyline-éosine. Avant que cette couche cémentoïde s'y déposât, la surface de l'ivoire avait subi une profonde résorption, comme en témoigne la ligne sinueuse qui sépare ces deux formations: les concavités de l'ivoire étaient originellement des lacunes de Howship.

Il est curieux de constater qu'au moment où la dent fut extraite, cette couche

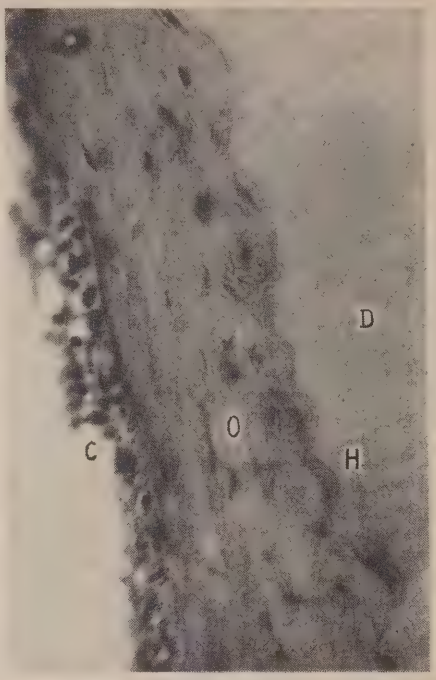

FIG. 14
Zone d'apposition réparatrice
O, couche ostéoïde néoformée
D, ivoire
C, cellules conjonctives bordant la paroi de la cavité
H, concavités du rebord de l'ivoire, qui étaient auparavant des lacunes de Howship

néoformée n'était pas stabilisée; on y observe en effet un processus singulier, dont les phases successives peuvent être suivies sur des microphotographies prises à différents niveaux.

En effet, lorsqu'on s'éloigne de la zone précédente vers la couronne, des changements commencent à se produire (fig. 15). Les éléments cellulaires, notamment les plus externes, s'hypertrophient et leur cytoplasme paraît s'éclaircir. En face de chaque cellule, la bordure de l'ivoire montre des concavités de profondeur croissante.

Si l'on poursuit cet examen en s'éloignant encore de l'apex, on voit que les cellules ont considérablement grossi, sont devenues globuleuses et vacuolaires, tant sur les bords qu'au milieu de ce tissu (fig. 16). Il s'agit à la fois d'une résorption marginale de l'ivoire et d'une lyse du tissu cémentoïde par ses propres cellules.

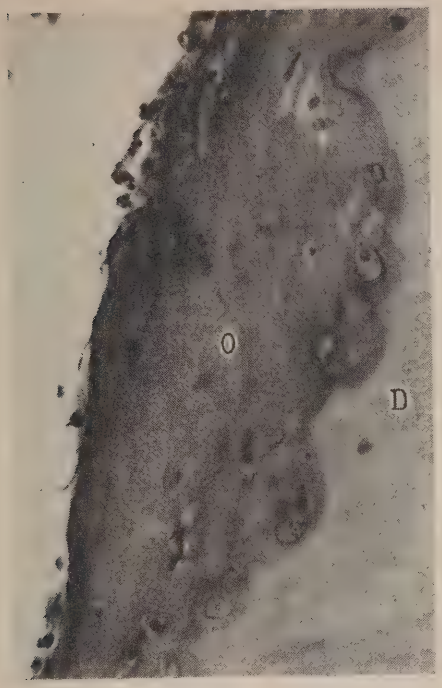

FIG. 15

Début de résorption dans la couche ostéoïde O, dont les cellules marginales augmentent de volume et accentuent les concavités de l'ivoire D.

Le résultat final de ce curieux processus apparaît à l'étape suivante (fig. 17), où l'ivoire est profondément érodé par des lacunes de Howship contenant les débris protoplasmiques dégénérés des cellules primitives dont quelques noyaux plus ou moins pycnotiques subsistent encore. Le dernier stade de la raréfaction est atteint dans l'ensemble de ce tissu, dont un fragment informe se détache de la paroi et reste suspendu dans la cavité.

Sur les autres parois de cette dernière, on ne rencontre plus aucune structure nucléée: c'est uniquement une surface d'ivoire dénudé, échancré de nombreuses lacunes vides.

Toutes nos observations histologiques confirment ainsi, à quelques détails près, les conclusions antérieures, et notamment les belles recherches de Warner, Orban, Hine et Ritchey[29].

Discussion Pathogenique

Nous ne savons à peu près rien quant au déterminisme de cette affection dont

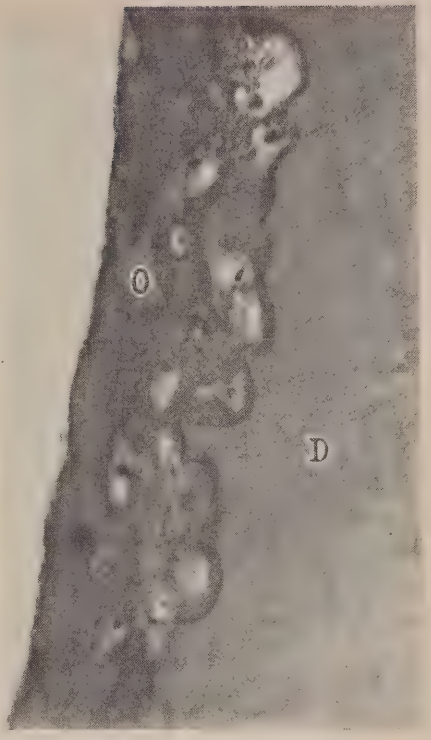

FIG. 16

Résorption marginale de l'ivoire et résorption de la couche ostéoïde par ses propres cellules
D. ivoire (tubuli et fibrilles de Tomes en section longitudinale),
O, couche ostéoïde, dont les cellules se sont considérablement élargies.

tous les caractères anatomo-pathologiques nous sont cependant connus.

Ce que nous connaissons, en effet, c'est ce que nous montre le microscope, c'est-à-dire les mécanismes *visibles* d'accroissement, d'arrêt, de réparation. Mais les facteurs réels, qui font naître la lésion à des moments et en des points apparemment fortuits, nous échappent encore complètement.

Il ne faut pas s'en étonner: la confrontation de cette affection avec certains processus similaires révèlerait ainsi d'étranges lacunes de nos connaissances, dont nul ne se soucie. Nous sommes trop habitués à constater sans comprendre et répugnons à expliquer ce qui semble trop simple et "naturel" pour mériter notre attention.

Qu'est-ce donc en effet qu'un granulôme pulpaire? C'est la localisation anor-

FIG. 17
Phase ultime de la résorption dans la couche ostéoïde O.
D, lacunes de Howship dans l'ivoire, contenant les débris cellulaires des ostéocytes primitifs

male d'un phénomène qui est normal ailleurs. Pulpômes, résorptions apicales des dents permanentes, résorption des dents réimplantées, résorptions radiculaires physiologiques des dents temporaires (dont nous ignorons toujours le facteur initial), tout cela ne fait qu'un. Ce ne sont que des cas particuliers d'un processus général qui nous apparaît comme physiologique ou pathologique selon les circonstances de temps et de lieu, selon qu'il entre ou non dans les cadres tout faits de notre logique.

En réalité, n'importe quelle formation conjonctive organisée et *vascularisée* peut faire retour au stade indifférencié. Il faut pour cela que le régime circulatoire change localement de façon durable. Une hyperémie prolongée peut transformer en effet l'activité conjonctive: l'état embryonnaire du tissu conjonctif est alors réalisé. C'est dans cet état nouveau (Wucherungsgewebe, tissu de bourgeonnement ou de granulation) qu'il manifeste son pouvoir phagocytaire, dont l'ostéoclasie n'est qu'une modalité particulière. Les éléments fixes du conjonctif fonctionnel (système réticulo-endothélial) engendrent sur place des éléments isolés, migrateurs (histiocytes), dont certains prennent la forme de cellules géantes multinucléées. Ces ostéoclastes commencent leur travail d'érosion sur les parois voisines. Selon que le foyer siège dans le périodonte ou dans la cavité pulpaire, on pourra observer une résorption de l'os alvéolaire, de la surface externe de la racine, ou des parois pulpaires de l'ivoire. Il n'y a donc aucune spécificité "organique" dans ce phénomène, qui n'est d'ailleurs pas propre à la dent, car il peut se produire n'importe où, partout où se trouve du tissu conjonctif modifiable au contact d'une zone calcifiée: ce n'est pas une question d'organe mais de tissu.

Le fait qu'il se produit le plus souvent dans le périodonte et exceptionnellement dans la pulpe signifie sans doute simplement que cette dernière est une zone plus différenciée, moins "réversible" et dont les conditions circulatoires sont très particulières (artères terminales, étranglement apical).

Mais pas plus pour les granulômes pulpaires que pour les dents temporaires, nous ne savons quel est le "motus incipiens" de la résorption, les dents de lait notamment pouvant se résorber sans aucun stimulus apparent et en l'absence même des dents de remplacement.

Ce qui fait à cet égard le caractère paradoxal des granulômes pulpaires, c'est précisément que *la pulpe proprement dite ne participe jamais, du moins chez l'Homme, aux phénomènes de résorption* et notamment à la résorption radiculaire des dents temporaires (Kronfeld[80]); elle est simplement envahie par le tissu de bourgeonnement au fur et à mesure que se poursuit l'absorption de la racine.

Le pulpôme est donc le seul cas ou la résorption *commence dans la pulpe.* Toutes les explications avancées à son sujet jusqu'à ce jour ne sont que de pures hypothèses.

Il ne paraît pas tout d'abord que l'on puisse déceler une condition générale favorisante: les sujets atteints sont des

sujets normaux par ailleurs. Aussi certains auteurs invoquent-ils la possibilité de traumatismes anciens (Palazzi[4], Von Eicken[16]). Mais les pulpômes généralisés à plusieurs dents, comme les cas survenant dans les dents incluses (fig. 4) échappent à une telle explication.

Pour Lohnert[20] il peut y avoir à la fois des facteurs exogènes (irritations pulpaires par les obturations, surcharge physiologique, traumatismes) et des facteurs endogènes (maladies infectieuses et sanguines, troubles métaboliques, intoxications). Pour Lepp[15], l'inflammation chronique de la pulpe et la résorption consécutive seraient dues à la présence de canaux accessoires anormaux. Colyer[25] pense à un trouble du développement, Mariani[27] croit à une carence momentanée en vitamine A provoquant un déséquilibre cellulaire de la pulpe qui se traduit par l'hyperplasie.

Cette énumération suffit à démontrer notre ignorance, qui tient sans doute à ce que l'on s'attache à expliquer isolément des cas particuliers.

On doit au contraire, à notre avis, faire un rapprochement entre les diverses formes de résorption externes et internes de cause inapparente. Tout se tient: le cas d'Euler[14], qui a observé une forme généralisée de pulpôme atteignant 25 dents est inséparable des résorptions apicales généralisées observées par Kronfeld et Mueller[32], par Carvallo[33], etc.

De telles systématisations bilatérales de la résorption suggèrent l'idée d'une *cause générale,* peut-être endocrinienne (rappelons-nous les résorptions apicales chez les hypothyroïdiens de H. Becks[38]), agissant en tout cas dans une région ou interviennent tant de facteurs locaux de fixation, de détermination des actions hormonales (loi de Kölliker-Pommer-Von Recklinghausen).

Quant aux résorptions localisées à une seule dent, elles ont sans doute un déterminisme différent. On peut même affirmer: d'une part que cette cause n'est pas unique, d'autre part qu'il n'existe pas de cloison étanche entre les résorptions externes et internes de la dent, une même cause pouvant provoquer les deux simultanément*

C'est ainsi qu'Orban[23], appliquant expérimentalement des inter-électrodes à haute fréquence dans la papille dentaire chez le Chien, a pu produire à la fois une résorption des parois pulpaires et une résorption de la surface externe des deux racines voisines. On peut rapprocher de cette observation les résorptions apicales progressives consécutives à des traitements radiculaires par les courants de haute fréquence, ou même à de simples pulpectomies.

C'est là une nouvelle preuve de l'identité étiologique de tous ces phénomènes. Dans tous ces cas, ce sont sans doute les modifications circulatoires provoquées qui sont à l'origine de la résorption et le tissu résorbant est toujours profondément remanié par des néo-vaisseaux dont le nombre et l'importance sont en rapport avec l'intensité et la rapidité du processus, comme G. Fischer l'avait montré autrefois dans la résorption des dents temporaires.

Il apparaît ainsi que les incitations initiales peuvent être de nature très diverse et sans aucun caractère spécifique, pour un résultat identique ou comparable. On peut dès lors concevoir que de multiples stimuli circulatoires puissent jouer le rôle déclenchant, et au premier chef les réflexes vaso-moteurs d'ordre sympathique.

D'autre part, en raison de la localisation fréquente des pulpômes sur les dents antéro-supérieures et de la pathologie si spéciale de cette région, nous pensons que de nombreux cas relèvent *d'infections subaiguës hématogènes,* qui se sont fixées électivement au niveau des terminaisons vasculaires locales. Une pathogénie identique peut expliquer les formes isolées de pulpômes qui s'observent, bien que plus rarement, sur les autres dents.

Cependant, Gottlieb[34] et avec lui Kronfeld[39] ont proposé une explication qui fait jouer le rôle prinicipal non aux facteurs circulatoires, mais à la *qualité des tissus durs.* Ceux-ci possèderaient des propriétés variables qui détermineraient tantôt la résorption, tantôt au contraire

*Kronfeld pense d'ailleurs que la résorption est tantôt à point de départ pulpaire, tantôt d'origine ligamentaire, et nous ne pouvons pas toujours préciser de quel côté a débuté le processus.

l'apposition réparatrice de nouvelles couches calcifiées. Gottlieb a traduit ces propriétés hypothétiques des tissus durs par le terme "plantationsfähig", qui indique leur pouvoir de résistance à la résorption et la possibilité d'appositions calcifiées à leur niveau, et par le terme "plantationsnegativ", qui indique leur propriété inverse d'être résorbables par ostéoclasie.

Une de ces "qualités" serait le degré de calcification. Dans l'ivoire, par exemple, les zones les plus récemment formées et moins calcifiées qui bordent la pulpe résistent plus longtemps que les autres à l'ostéoclasie, tant dans la résorption radiculaire à debut externe (Kronfeld[30]), que dans les granulômes pulpaires (voir les fig. 2, 3, 5).

Les dommages subis par les tissus durs, traumatismes en particulier, les rendraient impropres à l'apposition et au contraire aptes à être résorbés.

Pour l'Ecole Française, pénétrée des idées de Leriche, ces facteurs tenant à l'état des tissus durs ne sont pas les seuls: ce sont les conditions circulatoires qui jouent le rôle essentiel.

Résorption et apposition représentent deux résultantes opposées, apparemment contradictoires, d'un même trouble circulatoire, la congestion. Ses effets opposés sont liés à une question de régime, de débit sanguin: si la congestion est active, elle entretient l'état embryonnaire du tissu conjonctif, nécessaire à la résorption; si elle est passive, il y a une stase circulatoire, favorable à l'apposition.

D'autre part, tant que dure la période de congestion active il existe localement une concentration d'ions H+ à laquelle le complexe basique $(PO^4)^2Ca^3$ est maintenu en solution. Cette concentration particulière d'ions H+ est souvent appelée le pH critique; il est autour de 7.4. Lorsqu'une stase circulatoire se produit, la concentration d'ions H+ diminue, le pH critique est dépassé; les fluides interstitiels sont alors sursaturées d'ions Ca++ et P= et ainsi une nouvelle phase solide se dépose, suivant les étapes habituelles de l'ossification.

La structure et la forme de ce dépôt de réparation semblent différer selon qu'il se constitue à la périphérie, le long d'une paroi, ou au contraire en pleine masse conjonctive.

Dans le premier cas, il se dépose une couche calcifiée qui a généralement l'aspect de l'os lamellaire et que l'on qualifie souvent de cémentoïde pour cette raison (on parle aussi parfois "d'ostéodentine").

Dans le second cas, le dépôt qui se fait en pleine masse, loin de toute paroi, a d'emblée tendance à revêtir une forme globuleuse, polycentrique, orientée autour d'axes vasculaires d'aspect haversien. Si l'on n'y observe pas de systématisation aussi régulière que dans l'os compact normal, c'est probablement que ces formations intradentaires sont de par leur situation soustraites à toute influence mécanique et que les trabécules néoformées ne sont orientées par aucune ligne de force.

Enfin, ces néoformations ostéoïdes ont les caractères d'instabilité propres à l'os jeune; leurs éléments cellulaires, de métaplasie récente, conservent une certaine activité, qui se manifeste notamment sous la forme de propriétés phagocytaires (Bast[39]). C'est ainsi qu'ils peuvent dans certains cas résorber eux-mêmes leur propre gangue minérale et les parois calcifiées voisines, par un processus d'ostéolyse ostéoblastique analogue à l'oncose décrite autrefois par Von Recklinghausen (fig. 15, 16, 17).

Indications Therapeutiques

Nous devons à la vérité de reconnaître aux granulômes pulpaires un intérêt surtout spéculatif, lié aux questions de physiopathologie qu'ils soulèvent.

Il importe cependant de les bien connaître, car en pratique ils échappent souvent au diagnostic. L'absence de thérapeutique ou l'expectation conduisent par ailleurs à des accidents fâcheux, surtout regrettables quand il s'agit de dents antéro-supérieures, ce qui est le cas le plus fréquent.

Nous avons indiqué plus haut les éléments de ce diagnostic et montré les diverses localisations possibles des foyers de résorption.

Le traitement ne peut être qu'une *pulpectomie totale*, qu'il faudra faire le plus précocement possible. On évitera par

principe la dévitalisation arsenicale, car le foyer peut avoir atteint latéralement le périodonte et risque d'y diffuser le caustique. Le mieux est donc d'avoir recours à une anesthésie.

Dans certains cas de résorptions centrales ou latérales voisines de l'apex, une *résection apicale* sera en outre nécessaire.

Enfin, lorsque le couronne ou la racine auront subi une large résorption interne, on devra renforcer la dent par un tenon radiculaire métallique, qui portera, le cas échéant, une couronne artificielle de remplacement.

BIBLIOGRAPHIE

1°) *Granulomes pulpaires*

1. MUMMERY, J. H.: The Pathology of "Pink Spots" in Teeth. *British Dental Journ.* 41:301. *avr.* 1920.
2. MUMMERY, J. H.: Some further Cases of Chronic Perforating Hyperplasia of the Pulp, the so-called "Pink Spots". *British Dental Journ.* 47: 801, 1926.
3. SCHWEITZER, G.: Interne Granulôme der Zahnpulpa und ihre resorbierende Wirkung in Innern des Zahnkorpers. *Deutsche Zahnarztl. Wochenschr. No* 3, *mars* 1931.
4. PALAZZI, S.: Traité d'Odontologie. *Vallardi edit. Milan.*
5. THOMA, K. H.: Central Osteoclastic Resorption of Dentin and complete Repair with Osteodentin in the Permanent Molar of an Adult. *Dental Items of Int.* 57:28, *No* 1, 1935.
6. SOIFER: Internal Resorption of Teeth. *Dental Items of Int. No* 2, *fevr.* 1937.
7. APPLEBAUM, E.: Internal Resorption of Teeth. *Dental Cosmos,* 76:847, *aout* 1934.
8. CADENAT, E.: Le Pulpôme. *Revue de Stomatol.* 41:1, *janv.* 1939.
9. DECHAUME, M. et CHAPUT, A.:Granulôme interne de la pulpe coronaire sur une incisive centrale supérieure temporaire (Pulpôme). *Revue de Stomatologie.* 48: 532, *aout-sept;* 1947.
10. BOUYSSOU, M. et GILLE, P.: Notes sur deux ces de granulôme pulpaire. Revue de Stomatol. 45: 6, *janv-fevr.* 1944.
11. BOUYSSOU, M.: Etude histologique d'un cas de résorption dentinaire d'origine pulpaire. *Revue de Stomatol.* 47: 93, *mars-avr.* 1946.
12. BOUYSSOU, M.: Images histologiques d'une ossification hétérotopique intradentaire. *XIme Congrès Francais de Stomatologie, Paris* 1948.
13. JEANNERET, M.: Beitrag zum sogenannten internen Granulom. *Schweiz. Monatschr. fur Zahnhlk.* 57:378, 1947.
14. EULER, H.: Die Anomalien, Fehlbildungen und Verkummerungen der menschlichen Zähne.*Verlag Lehmann, Munich* 1939.
15. LEPP, H.: Beitrag zur Abgrenzung des sogenannten internen Granuloms. *Deutsche Zahn-Mund und Kieferhlk.* 5, *No* v, *janv.* 1938.
16. Von EICKEN: Ein Beitrag zur Kenntnis der internen Zahngranulome. *Zahnarztl. Rundschau,* 44, 3 *nov.* 1935.
17. FISCHER, C. H.: Zur Frage der inneren Zahngranulome. *Deutsche Zahn-Mund und Kieferhlk.* 3:534, *aout* 1936.
18. HAMMER: Beitrag zur Frage der inneren Zahngranulome. *Deutsche Zahn-Mund und Kieferhlk.* 1, *No* 4, *avr.* 1934.
19. KRANZL: Ein Beitrag zu den internen Granulome der Zahnpulpa. *Zeitschr. fur Stomatol.* 35, *No* 13, 1936.
20. LOHNERT, K.: Internen Granulôme. *Deutsche Zahnarztl. Wochenschr.* 48: 1140, 27 *nov.* 1936.
21. MUNCH: Zur Genese, Klinik und Therapie der sogenannten interne Granulome. *Deutsche Zahn-Muund und Kieferhlk.* 4, *No* 6, *juin* 1937.
22. VANDORY, W.: Uber sogenannte innere Pulpagranulome. *Zeitschr. fur Stomatol.* 34: 937, *No* 14-15, 1936.
23. ORBAN, B.: *Fortschr. der Zahnhlk.* 8:669, 1932, cité par GOTTLIEB in *"Dental Caries", Lea & Febiger, édit. P.* 217 (Experimentally produced Internal Resorption).
24. DEMUTH, W.: Ein Fall von internem Pulpagranulom. *Zeitschr. fur Stomatol.* 44:366, 1947.
25. COLYER, J. L. et SPRAWSON, E.: Dental Surgery and Pathology. *Longmans, Green and Co., édit. Londres.*
26. KLEES,L et PHILIPPART, R.: A propos de deux cas de granulôme interne. *Revue* de Stomatol. 49:414, juillet 1948.
27. MARIANI,M.: L'étiologie du granulôme interne de Schweitzer. *Revue de Stomamal* 49:107, *fevr.-mars* 1948.
28. KRONFELD, R.: Histopathology of the Teeth and their surrounding Structures. *2me edit. Lea & Febiger, edit. Philadelphie.*
29. WARNER, G. R., ORBAN, B., HINE, M. K., et RITCHEY, B. T.: Internal Resorption of Teeth: Interpretation of histologic findings. *Journ. Amer. Dental Assn,* 34:468, *ler avr.* 1947.

2°) *Questions associées*

30. KRONFELD, R.: The Resorption of the Roots of Deciduous Teeth. *Dental Cosmos,* 74:103, *févr.* 1932.
31. KRONFELD, R.: Spielt die Qualität der Hardsubstanzen bei der Resorption eine Rolle? *Zeitschr. fur Stomatol.* 25:1099, *nov.* 1927.
32. KRONFELD, R. et MUELLER, E.: Ein Fall von generalisierter Zahnresorption. *Zeitschr. fur Stomatol.* 29:276, *mars* 1931.
33. CARNVALLO: Une observation de rhizalyse trophique. *Revue de Stomatol.* 36:466, *juillet* 1934.
34. GOTTLIEB, B., ORBAN, B. et DIAMOND, M.: Biology and Pathology. *The MacMillan Co, édit. New-York.*
35. AISENBERG, M. S.: Bone in Pulp Chamber. *Journ. Dental Research,* 17:371, 1938.
36. CAHN, L. R.: A case of Bone Metaplasia in the Root Canal of Teeth. *Dental Items of Int.* 54:510, *juillet* 1932.
37. LERICHE, R.: Physiologie et Pathologie du Tissu Osseux (*Chaire de Médecine du Collège de France*). *Masson & Co, édit. Paris.*
38. BECKS, H.: Root Resorptions and their relations to Pathologic Bone Formation. *Intern. Journ. Orthod.* 22:445, *mai* 1936.
39. BAST: The Phagocytic Activity of Bone Cells. *Anatom. Record,* 28:91, 1924.
40. HAUPL, K.: Grundriss der Histopathologie des Zahnes und seines Stutzapparates. *Verlag Barth, Leipzig.*

Dans le monde dentaire

Congrès national de l'A.D.C.

Le congrès national de l'Association Dentaire Canadienne aura lieu à Saskatoon, province de Saskatchewan, du 5 au 8 juin, conjointement avec le congrès de la Western Canada Dental Society.

En même temps, aura lieu la réunion de la Western Canada Dental Nurses' and Dental Assistants' Association.

On est prié de surveiller les annonces subséquentes.

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Tournée du Président et du Secrétaire.

Le Président et le Secrétaire de l'A.D.C., les docteurs J. Howard Merkeley et Don W. Gullett, ont payé une visite officielle aux sociétés dentaires de l'ouest du Canada, durant novembre. Ils ont visité les centres suivants: Régina, Lethbridge, Calgary, Victoria, Vancouver, Edmonton, Saskatoon, Winnipeg et ont présenté des conférences intitulées: "Les activités de l'A.D.C., aujourd'hui et demain," et "Assurance-santé en Angleterre."

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Nomination d'un directeur des services dentaires, au Nouveau-Brunswick

Le docteur R. S. Langstroth, ancien membre du Corps Dentaire Canadien, durant la dernière guerre, et, peu après, Surintendant de district pour le Département des Affaires des Vétérans, au Nouveau-Brunswick, vient d'être nommé Directeur des Services de Santé Dentaire par le gouvernement de cette province.

Le docteur Langstroth est actuellement à l'Université de Toronto, où il suit un cours de Santé Publique.

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Nomination d'un directeur des services dentaires, en Saskatchewan

Le docteur A. E. Chegwin vient d'être nommé Directeur des Services de Santé Dentaire pour la province de Saskatchewan, par le gouvernement de cette province. Le docteur Chegwin, qui a exercé à Moose Jaw et qui a fait du service militaire avec le Corps Dentaire, au cours de la dernière guerre, est entré en fonction le 1er novembre 1948.

Note:—Avec ces deux nominations, quatre provinces du Canada ont des Directeurs de Services Dentaires à plein temps.

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Enquête sur les revenus de la profession medicale

Le Ministère du Commerce vient de publier des statistiques amassées sur les revenus comparés des médecins canadiens pour les années 1939, 1944, 1945, 1946. Ces chiffres peuvent se comparer avec ceux, qui ont été publiés au sujet de profession dentaire, puisque les enquêtes ont été menées de la même manière.

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Fluorure de sodium et son usage par les dentistes

Le docteur Don W. Gullett, secrétaire de l'Association Dentaire Canadienne a demandé la coopération des pharmaciens dans l'emploi, par les dentistes, du Fluorure de Sodium pour prévenir expérimentalement la carie dentaire.

On a indiqué aux dentistes la technique précise pour utiliser le fluorure de sodium. Une méthode identique est indispensable pour évaluer à fond les résultats d'expériences, entreprises dans tout le Canada.

L'Association demande à tous les pharmaciens de toutes les provinces de coopérer à cette entreprise et de bien considérer les points suivants:

1) Un fluorure de sodium, chimiquement pur seulement, devrait être fourni aux dentistes. Le fluorure de sodium communément employé contre la vermine est impropre à un usage dentaire.
2) Une solution de 2% de fluorure de sodium dilué une eau distillée stérile devra être utilisée.
3) Seulement les dentistes pourront se procurer cette solution et on devra exiger une ordonnance à cause de la toxicité du produit et en vue de l'importance des résultats de ces recherches.

Une enquête menée à Toronto, chez les pharmaciens grossistes, indique que le fluorure de sodium à 2% peut être obtenu dans des bouteilles de 4 onces, à un coût, qui varie entre 78 et 80 sous chacune.

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Le Collège Royal des Chirurgiens d'Angleterre

Le 20 mai 1947, Sa Majesté le Roi accordait une charte supplémentaire au Collège Royal des Chirurgiens d'Angleterre renfermant dans ses articles le pouvoir de fonder une Faculté de Dentisterie et d'accorder des "fellowships" en Chirurgie Dentaire. Cet évenement marquait une date mémorable dans l'histoire de la dentisterie anglaise.

Pour comprendre la portée de cet évenement, il est nécessaire de résumer brièvement l'histoire du Collège Royal des Chirurgiens d'Angleterre. Au cours du 14e siècle, deux corporations existaient, à Londres, la Compagnie des Barbiers de Londres et le "Fellowship" ou le Guilde des Chirurgiens. Il y avait une grande rivalité entre ces deux organisations. Avec le temps, ces deux organismes s'unirent et recurent le pouvoir de faire subir des examens à ceux, qui désiraient pratiquer. Vers 1684, les chirurgiens se rendirent compte de l'incongruité et des inconvénients d'une association conjointe avec les barbiers et demandèrent la dissolution de cette union, qui se produisit en 1745. Dans le règlement de ce divorce, les barbiers retinrent les immeubles et les autres propriétés de la Corporation et les chirurgiens se virent forcés d'acquérir de nouveaux biens. Les chirurgiens construisirent d'abord une salle, connue sous le nom de "Salle des Chirurgiens," dans le Vieux Bailey, et quarante-cinq ans plus tard devinrent propriétaires de l'immeuble, occupé encore de nos jours, au Lincoln's Inn Fields.

En l'année 1800, cette Compagnie de Chirurgiens fut ré-incorporée et constituée sous le nom du Collège Royal des Chirurgiens de Londres et se vit confiée le soin de la collection Huntérienne, qui fut le début du musée actuel. Cette collection intéresse la profession dentaire par les articles dentaires, qu'elle contient. Presque tous les textes dentaires historiques parlent des expériences de Hunter, qui transplanta une dent dans la crête d'un coq, qui peut être encore vu aujourd'hui.

Plusieurs modifications furent effectuées dans la rédaction d'une nouvelle charte, entr'autres l'adoption d'un nouveau nom: Le Collège Royal des Chirurgiens d'Angleterre. Le droit de faire passer des examens et d'octroyer des licences lui fut donné.

Dans le but de hausser le niveau de la profession dentaire, des groupes de dentistes demandèrent à plusieurs reprises, la reconnaissance officielle de leur existence et une règlementation d'examens et de licence par ce Collège. Le règlement de cette question fut lent à s'effectuer à cause de divergences d'opinions entre les deux organismes représentant les dentistes. Le Société Odontologique, dont John Tomes fut une figure marquante, recommandait l'incorporation de la profession dentaire au sein de la profession médicale, tandis que le Collège des Dentistes voulait maintenir l'autonomie de la profession dentaire. Finalement, en 1857, la Société Odontologique réussit à insérer une clause dans la loi médicale, qui était passée devant le Parlement, accordant au Collège Royal des Chirurgiens d'Angleterre le pouvoir d'élaborer et de faire subir des examens sur la capacité à pratiquer comme dentistes et d'accorder des certificats "ad hoc". La sanction de cette loi inaugurait en Angleterre la Licence en Chirurgie Dentaire. La plus grande partie de tout ce qui a été accompli en education dentaire, en Grande Bretagne, date de ce moment.

Un grand nombre de dentistes ont obtenu un "membership" (M.R.C.S.) et quelques-uns "fellowship" (F.R.C.S.) en remplissant les exigences des chirurgiens.

De temps en temps, on énonce un voeu pour que les qualifications exigées des dentistes, séparément, soient plus sévères. Durant la dernière guerre, il y eut plusieurs réunions entre les représentants du Collège et ceux de l'Association Dentaire Britannique pour l'établissement d'une Faculté Dentaire. Le 20 mai 1947, comme il est dit plus haut, un "fellowship" au sein du Collège fut établi et est connu sous le vocable "Fellowship in Chirurgie Dentaire du Collège Royal des Chirurgiens d'Angleterre (F.D.S.R.-C.S. Eng.)" Le professeur R. Bradlaw a été nommé premier doyen de la Faculté. Le premier canadien à être honoré par la Faculté fut le Dr Roy G. Ellis, de Toronto, le 28 juillet de l'année dernière.

Le but réel du Collège Royal des Chirurgiens d'Angleterre est de favoriser les qualifications post-colaires. Le diplôme de "Fellow" en Chirurgie Dentaire peut être accordé à ceux qui possèdent des qualifications dentaires reconnues par le Conseil du Collège. Les candidats doivent passer deux examens, à savoir, l'examen préliminaire en Anatomie, Physiologie et Pathologie et, l'examen final, en Chirurgie, Chirurgie Dentaire et Pathologie. Les examens sont en partie écrits et en partie oraux et ont lieu en avril et octobre, de chaque année. Les candidats ont la faculté d'étudier à loisir dans la bibliothèque et le musée du Collège.

DON W. GULLETT, D.D.S.

Lettre aux Gouverneurs, A.D.C., Vol. 5, No 3.

Commentaires sur la dentisterie d'Etat britannique

L'article suivant apparaissait dans la publication de l'Association des Manufacturiers Canadiens, "L'INDUSTRIE", livraison de décembre 1948.

"Maintenant que les dents anglaises ont été "nationalisées" par M. Aneurin Bevan, dans sa loi de Santé Nationale, il y a un grand nombre de dentistes heureux de fraiser et d'obturer les bouches des citoyens de la Vieille Angleterre.

Ces dentistes ont frappé le gros lot, en recevant presque le double des honoraires qu'ils percevaient autrefois et cela en traitant les dents "gratuitement", aux frais de la princesse. M. Bevan fait figure de Saint-Nicolas.

Ce qui est plus, les Anglais, que négligeaient leurs molaires et qui se rendaient chez le dentiste, quand la douleur les y forçaient et qui, en plus, devaient payer pour ces traitements, font maintenant la queue aux cabinets des dentistes. Les cabinets situés dans des régions industrielles doivent rester ouverts jusqu'à 10.30 hrs p.m., tellement l'affluence est grande.

Même les auteurs de ce plan sont renversés.

Les Anglais savaient que leurs dents étaient mauvaises. Dans l'été de 1938, M. Walter Elliot, à ce temps Ministre dans le Cabinet conservateur, disaient dans une réunion publique: "Les dents de notre population sont pourries." Mais, à cette époque, ils devaient régler leurs notes eux-mêmes; il n'y avait pas d'organisation socialiste pour payer la casse.

Ce tableau est alléchant, mais—il semble toujours y avoir un "mais", quand un plan du genre est mis sur pied—tous les dentistes ne sont pas heureux.

D'abord, disent-ils, cette avalanche de traitements ne peut qu'amener un rendement inférieur, une production à la chaine, parce que les dentistes, qui adhèrent à ce plan, essayent de traiter trop de patients dans un temps insuffisant. Ils disent qu'il est pénible de traiter plus de 15 à 18 patients par jour, sans mettre en danger leur propre santé. Et quelques dentistes passent jusqu'à 30 patients par jour!

Ensuite, les dissidents craignent que leur profession soit reléguée au niveau d'un métier purement utilitaire. L'idée de M. Bevan, répliquent-ils, est de créer une dentisterie d'Etat et de faire des dentistes de simples fonctionnaires. Cette idée ne leur sourit pas. Et le "mais" le plus important est celui-ci. Le plan original estimaient les soins dentaires gratuits à approximativement £7,000,000, par année.

Mais si l'avalanche continue, il en coutera au moins £35,000,000 par année. Cela signifie $140,000,000 en notre langage. D'où viendra tout cet argent? Vous l'avez deviné, de la poche des concitoyens, qui payent des impôts!

Lettre aux Gouverneurs, A.D.C., vol. 5, no 7.

Cours de perfectionnement à l'Université

Des cours post-scolaires sont offerts aux praticiens à la faculté de Chirurgie Dentaire de l'Université de Montréal, durant le mois de mars:

CHIRURGIE	les 7, 8, 10, 15, 16 et 17 mars 1949 (matinées seulement)
DIAGNOSTIC	du 14 au 19 mars 1949
ORTHODONTIE	du 7 au 19 mars 1949
PEDODONTIE	les 29, 30, 31 mars et le 1er avril 1949

Cours du docteur Sterling V. Mead, à l'Université de Montréal

Photographie prise du groupe de dentistes, qui ont suivi un cours de Chirurgie et d'Anesthésis, donnê par le docteur Sterling V.Mead, de Washington, D.C. à la faculté de Chirurgie Dentaire de l'Université de Montréal.

Première rangée, de g. à d.: Antoine Raymond, Montréal, Jacques Bélanger, Montréal, J. N. Thibert, Fitchburg, Mass., Sterling G. Mead, Washington, D.C., James A. Milne, Glasgow, N.-E., Gérard de Montigny, Montréal, Sterling V.Mead, Washington, D.C., Ernest Charron, Montréal, Pierre Rouleau, Montréal, Douglas Brown, Winnipeg, Man., Guy Langelier, Montréal, Paul Dionne, Joliette, Paul Trépanier, Verdun.

Deuxième rangée, de g. à d.: Fernand Lalonde, Montréal, Paul Riverin, Chicoutimi, Roger Lamarche, Montréal, P. Cloutier, Montréal, J. C. Montgomery, Ottawa, Ernest E. Eades, Moose Jaw, Sask., Daniel Steinberg, Montréal, F. A. Blatchford, Fort William, Ont., Roy Perry, Windsor, Ont.

Troisième rangée, de g. à d.: Harold E. Armstrong, Toronto, Ont., Walter S. Phelps, Montréal, S. Georges Werry, Oshawa, Ont., Louis Perlman, Windsor, Ont., Roy E. Bier, Winnipeg, Man., S. Rosen, Hamilton, Ont., C. S. Watters, Hamilton, Ont., S. Chernin, Glace Bay, N.-E., Francel Papailler, Haiti.

Quatrième rangée, de g. à d.: Russell G. Hyde, Hagersville, Ont., Donald R. Parkes, Caledonia, Ont., Carl T. Moyle, Hamilton, Ont., W. J. Joynt, Ottawa, Ont., J. H. Johnson, Toronto, Ont., Leonard J. Easter, Dundas, Ont., Edwin McMillan, Whitby, Ont.

Les dentistes et le crédit

Sous les auspices de la National Association of Personal Finance Companies, le département d'Administration d'Affaire de l'Université de l'Illinois a récemment fait une enquête sur l'évaluation des risques de crédit en rapport avec les différentes occupations. La liste suivante indique les pourcentages de la valeur des risques de crédit de chacune des occupations énumérées:

Employés de bureau, 92.2; épiciers détaillants, 89.8; gérants de magasins à chaine, 89.2; autres détaillants, 89.0; instituteurs, 86.4; employés de chemin de fer, 85.6; vendeurs au détail, 83.2; dentistes, 82.2; médecins; 80.4; garde-malades, 71.2; fermiers (patrons), 70.8; employés d'usine, 70.0; voyageurs, 68.8; employés aux débits d'essence, 63.0; employées d'usine, 61.0; avocats, 60.8; mécaniciens d'automobiles, 60.0; concierges, 60.0; fermiers (locataires), 59.2; maçons, 59.0; agents de police et pompiers, 58.2; mineurs, 57.6; étudiants, 55.5; serviteurs de maison, 55.2; menuisiers, 52.6; employés d'hôtel, 48.2; vendeurs d'autos, 47.0; journaliers, 46.0; employés de restaurants, 44.6; barbiers, 42.8; chauffeurs d'autobus ou de camions, 42.6; peintres, 38.2.

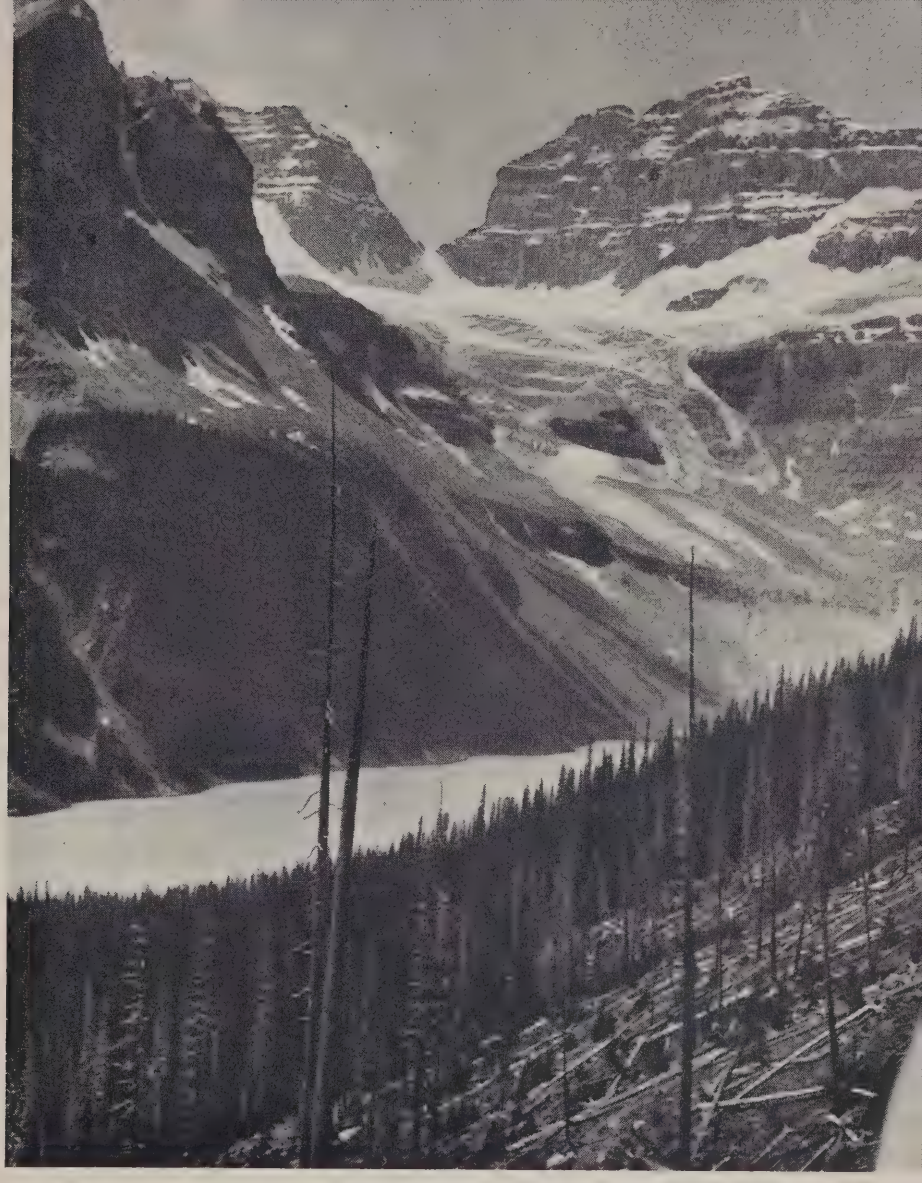

Photo copyright Clifford R. Kopas

Lake Gloria and some of the mountains around Mount Assiniboine

Lake Gloria is about fifty miles south-west of Banff and available by pack-train only. The sky-line is the Inter-provincial boundary between Alberta and British Columbia. Mount Assiniboine, the highest of the group of mountains that make this Alpine wonderland is 11,870 feet high, and looks down on Lake Gloria and a hundred lesser sisters. There is lodge accommodation at Mount Assiniboine, and a trip from Banff with pack-train is something one won't forget.

A. D. RICHARDSON, D.D.S., Montreal, Quebec.

President, Montreal Dental Club.
Past President, Montreal Endodontia Society.
Member, American Assoc. of Endodontists.
Lecturer, Faculty of Dentistry, McGill University.
Graduate of McGill, Class of 1924.

The Journal
OF THE CANADIAN DENTAL ASSOCIATION

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THE NATIONAL DENTAL HEALTH SERVICE IN BRITAIN

by J. MENZIES CAMPBELL, F.R.S.E., D.D.S. (Univ. Toronto), L.D.S. (R.F.P.S. Glas.), L.D.S. (R.C.D.S. Ont.), of Glasgow, Scotland.

Before attempting to discuss the status of dentistry in the National Health Service, which started on July 5, 1948, it would seem appropriate to refer to certain sound advice, which the British Dental Association gave to its members, prior to the inception of the Act. For instance, in a poster (for display in reception rooms), addressed "To my Patients," read, "If I entered the Service, the type of dentistry I could give you would be restricted. I should be forced to do 'utility' dentistry—far below the standard I want to give, or you want to receive."

Further, the British Dental Association, in a circular to its members, stated "The Association objects to the proposed Service, because it will destroy the present patient-practitioner relationship, will limit the 'clinical freedom of the dentist', put a premium on 'utility' dentistry, and offer no encouragement to the dentist of exceptional ability and enthusiasm".

In order to appreciate the position, it is essential to realize that dental benefits form only one part of a very comprehensive health plan, which is available to every man, woman and child in this country, irrespective of age or income: and which is under the direct control of the Minister of Health (Mr. Aneurin Bevan).

Every one from 18 to 65 years of age must possess a National Insurance Card, and pay contributions weekly by means of National Insurance Stamps (purchasable at post offices), affixed to their cards.

Speaking generally, the population is divided into three main categories:—(1) Employed persons, (2) Self-employed persons, and (3) Non-employed persons. All of these, with a few exceptions (e.g. married women not employed outside their own homes), must pay contributions varying in amount according to classification.

I ought, at this stage, to explain (particularly as it is a subject, which has puzzled many of my Canadian colleagues) that there are two classes of dentists in Britain:—(1) Those holding a Degree or Licence in Dentistry, and (2) Those not possessing such qualifications, termed "Dentists 1921". However, in the National Health Service, no distinction is made between them; both receive the same fees from the State for dental services rendered. Similarly, age, experience and additional qualifications do not affect remuneration.

In order to operate the dental benefits, the Minister of Health has decentralized the ordinary administration by appointing "Executive Councils" throughout Britain. Among their duties is the preparation of, and maintaining up to date, lists of all dentists in the Scheme often termed "Partici-

pating Dentists." These lists, which, it was officially stated, would be available for reference in post offices and public libraries, have not, as yet, appeared! According to figures given by the Ministry of Health on January 21, 1949, 8,988 dentists have joined the Scheme out of a possible 10,000, i.e. excluding those retired, holding public appointments, or in full-time posts on teaching staffs of dental schools.

The Minister of Health has, also, appointed a "Dental Estimates Board", which comprises dentists and laymen, and which deals with, among other items, the payments to dentists. In this connection, he has stated that, although he is anxious to permit the fullest possible latitude, he, nevertheless, considers that he must retain some interest in the cost and standard of the services rendered. Consequently, he defines certain treatment, which can be executed without prior authority from the "Dental Estimates Board". This is restricted to the simplest dental operations, such as prophylaxis, fillings, extractions for the relief of pain, and ordinary repairs to dentures.

On the other hand, treatment, such as extraction of teeth when this would necessitate the provision of artificial dentures, orthodontia, removal of impacted teeth, crowns, and gold fillings and inlays, cannot be started without the sanction of this Board. Besides being empowered to approve or reject an estimate submitted by a dentist, the "Dental Estimates Board" has authority to arrange for the examination of any patient. Should a dentist be dissatisfied with its decision, he is entitled to lodge an appeal with the Minister of Health, who, in such a case, appoints two dentists to investigate the position.

All dentists in the Scheme must keep proper records on suitable cards, which are supplied by the Ministry of Health; and these are signed by the patient on the completion of treatment. Further, the Ministry has the power to send officials to inspect dentists' consulting rooms, etc.

It is, also, stated in the Regulations that a dentist, employing a dental technician, must pay him a rate of wages and observe hours and conditions of work, not less favourable than those approved by the "National Joint Council for the Craft of Dental Technicians".

Many practitioners have urged the Minister of Health to insist that applicants for dental services under the Scheme should be required to undergo all the treatment necessary to render them dentally fit. He, however, decided that he could not agree to deprive any persons, unwilling to undergo complete treatment, of such dental benefits as they might desire, because the Scheme, available to all, is provided out of public funds.

In order to determine the remuneration for dentists in the Scheme, the Minister of Health, on September 2, 1946, appointed an "Inter-Departmental Committee on the Remuneration of General Dental Practitioners". Considerable evidence was heard, and this Report (often termed the "Spens Report", the Committee's Chairman having been Sir William Spens) was, in May 1948, submitted to Parliament by the Minister of Health.

One paragraph of this Report is significant, and worthy of record:—

> "Witnesses repeatedly emphasized that the great bulk of a dentist's working time . . . is spent in his surgery . . . and the greater part of it in actual operative work in the mouth, which is difficult of access . . . for the most part upon the conscious and apprehensive patient; and we were impressed by the unanimity of their evidence as to the resulting strain on the practitioner. We are convinced that this imposes a very real limit upon the number of hours that a dentist can be expected to work at the chairside, without loss of efficiency. After exhaustive enquiry, we reached the conclusion that 33 hours a week by the chairside for 46 weeks in a year, or say 1,500 chairside hours a year,

together with the hours necessarily spent outside the surgery, represent full but not excessive employment and that, generally speaking, employment in excess of these hours tends to impair efficiency."

The Minister of Health, thereafter, fixed the scale of fees to be paid to dentists. Here are a few examples of those, at present, in force:— Normal polishing, 16/6. Fillings—amalgam, £1 to £1 10 6: silicate, £1 5/- to £1 17 6. Artificial dentures, £10 10/-. Repairs 18/6 to £2. Apicectomy, £4 to £5. Radiological examination, 10/6 to £5 5/-. Removal of cysts, buried roots or impacted teeth, £7 15/- + anæsthetist's fee. Arrest of hæmorrhage, £1. Gold fillings up to £5 10/-. Gold inlays up to £7 2 6. Jacket crowns, £7 10/- to £9 7 6.

The original estimate of the Ministry of Health for the dental section of the Health Scheme for the first nine months was £7,000,000. At the present rate of progress, it has been officially stated that this figure will be around £28,000,000.

It must be realized that the British taxpayer will be called upon to liquidate this astronomical expenditure. It is not, therefore, surprising that the Minister of Health feels that there is a duty incumbent on him to ensure that public funds are disbursed to the best advantage. In the House of Commons, Mr. Bevan recently stated that it was obvious that some dentists were earning far more than the Spens Committee ever contemplated. He had, therefore, decided to reduce by half all fees in excess of £4,800 annual gross income —£1,000 above the point, at which the Spens Committee said the risk of bad dentistry began. The Minister added that doctors, already, had a limit to the number of patients allowed on their lists.

This announcement has caused considerable discontent among many of those in the Scheme. They, not unnaturally, fear still further cuts in their incomes.

Further, there seems to be no doubt that the ultimate aim of the Minister of Health is to operate dental benefits by a full-time staff from health clinics, as soon as these can be built and equipped: and not, as at present, from private dental surgeries.

An inducement to dentists to join the Scheme is that 6 per cent is deducted, each month, from the cheque, which the dentist receives for treatment completed during the previous month; and 8 per cent is added to this by the State. Consequently, 14 per cent is credited to the dentist as a pension, payable when he attains the age of 65. Not unnaturally, this tempting security for old age has resulted in many dentists working very long hours in order to increase their pensions.

It has been suggested in the profession that a grant-in-aid scheme, instead of the present system, is the ideal solution. It must, however, be borne in mind that patients, who could afford to pay more, would, undoubtedly, secure priority over other patients.

Let us, at this stage, consider a few of the many statements, which have appeared in the daily press concerning the Scheme.

(a) One dentist, it was officially stated, had earned £28 8 6 for carrying out 28 fillings, an examination and a scaling, for one patient, all in three hours, on a Saturday afternoon.

(b) On one dentist's door is a notice, "No new patients for 12 months".

(c) A dentist acknowledges that, "at top speed, he can do 10 fillings an hour".

(d) Another dentist admits that he now treats 70 to 80 patients a day, and that there are seldom fewer than 15 persons waiting in his rooms.

(e) A dentist states that he works 75 hours a week; and many others that they work till 10.30 o'clock, five nights a week.

(f) A sufferer from violent toothache reported that he telephoned his dentist for an appointment for an extraction, as soon as possible. Not for six weeks was the reply: and the same from four other dentists, whom he approached.

As one would naturally expect, the

comic press has not been slow to indulge in banter. For instance, the legend attached to one cartoon of two patients, waiting in a very sparsely appointed room, reads:—"Do you fancy these magazines of his, "The Financial Guide", or "The Millionaire's Gazette"? Another depicts a room full of patients waiting for attention. A sufferer, holding his jaw, expresses surprise at seeing a man in bed with his face completely muffled. The latter replies, "When you have been waiting as long as I have, you will bring your bed too".

As yet, it is too early to pass a considered judgment on the efficiency of the dental services under the National Health Scheme. It is, likewise, premature to determine the position of private dental practice in the future. In fact, it is questionable if the dental profession, having now forfeited its independence, by accepting State-aid has not lost its right to be termed a profession!

(Incidentally, I have not joined the Scheme, because I am, fundamentally, opposed to being compelled to submit the details of treatment, which I may recommend, and which my patients may desire, to any State-appointed board for approval or rejection. I prefer a personal contract basis, which maintains the pleasant professional relationships, which have, hitherto, existed between my patients and myself.)

ANNOUNCEMENTS

Nineteen Forty-nine Session of The Federation Dentaire Internationale

The next annual session of this Federation will be held in Milan, Italy May 30 to June 5, 1949. The executive had hoped that this meeting might be held in Oslo, Norway and the Norwegian committee expressed the wish of having the F.D.I. meeting coincide with an important Scandinavian Professional Reunion in October but as this date was not suitable the invitation of the Italian National Committee was accepted.

American Dental Society of Europe

This Society will hold a meeting in Paris on August 3-6, 1949.

Dr. F. Douglas Derrick, Secretary,
140 Park Lane, London, W.I., England.

Mid-Atlantic Seminar in Oral Medicine

This Seminar will be held May 22-27, 1949, at the Skytop Club, Skytop, Pennsylvania. It is being offered by the Postgraduate Division of the University of Pennsylvania School of Dentistry.

The fee for this Seminar including registration, lodging and meals for the 5 days is $250.00.

Further information can be obtained from Dr. L. W. Burket, Postgraduate Division, School of Dentistry, Univ. of Pennsylvania, 4001 Spruce St., Philadelphia 4, Penn.

ANNOUNCEMENTS

Dominion Dental Council Examinations

The written Examinations will be held from June 13 to June 18, 1949 from 9 a.m. to 12 noon.

The Clinical examinations will be held as soon after convocation as possible, at the convenience of the Clinical Examiners in each centre. All candidates should get in touch with the Clinical Examiners to secure dates and advice as to what equipment they will be required to provide.

The fee for Class A and E is $100.00 and application forms to take the examination may be obtained at the respective Dental Schools. These application forms should be completed and in the Secretary's office *not later than May 15.*

The fee for Class D is $150.00 and application forms may be obtained by writing the Secretary. Completed application forms should be in the Secretary's office *not later than April 15.*

A. J. Brett, Secretary Treasurer,
Regina, Saskatchewan.

Meeting of Board of Governors of C.D.A.

The C.D.A. Governors will meet at the Bessborough Hotel in Saskatoon commencing Thursday, June 2, at 1:30 p.m.

CARBOHYDRATES IN FOOD

by DR. L. B. PETT, Chief, Nutrition Division, Department of National Health and Welfare, Ottawa, Canada.

Soluble carbohydrates are sometimes referred to as sugars, and *insoluble ones* as starches. Most sugars are at once available as food for bacteria and hence may be used by certain organisms in the mouth which produce acid. There is evidence that this acid acts on the enamel of teeth in the production of cavities. *The starches* must first be broken down before bacteria can use them. While an enzyme in saliva may accomplish this, most of the hydrolysis of starch occurs in the small intestine. There is evidence that the starches are not much used by the acid forming organisms in the mouth. Therefore they have been separated from the sugars in the figures below, but for easy comparison have been calculated in terms of the sugar they would yield if completely broken down.

It is easy to say "Cut out of your diet all sugars," but such advice is not followed. It is better to say "Choose foods to keep down the sugars by using this list."

The following table gives the approximate carbohydrate content of popular foods expressed in amounts equivalent to level teaspoonsful of sugar. Carbohydrate in fruit and milk has been considered a sugar, while the carbohydrate of flour and starch is insoluble and has been calculated as sugar equivalent.

The sugar equivalent of prepared foods varies according to the recipe used. Recipes used in this table are taken from the Canadian Cook Book and the Boston Cooking School Cook Book.

Mimeographed copies of this list are available from each Provincial Department of Health.

FOOD	COMMON MEASURE	Soluble sugar, tsp. This is the column to watch!	Insoluble carbohydrate in sugar equivalents, tsp.	Total carbohydrate as tsp. of sugar
BAKED GOODS				
Raisin Pie	1/6 medium pie	10	6	16
Pumpkin Pie	1/6 medium pie	10	2½	12½
Apple Pie	1/6 medium pie	8	5	13
Chocolate Cake	1/20 large cake, layer, iced	7	2	9
Angel Cake	1/12 large cake, not iced	5	1	6
Cherry Pie	1/6 medium pie	5	5	10
Coconut Custard Pie	1/6 medium pie	5	2½	7½
Cream Puffs	1 average	4	3	7
Sponge Cake	1/12 large cake, not iced	3	1	4
Gingersnaps	1/36 recipe	2½	1	3½
Light Cake	1/20 large cake, loaf, not iced	2	2	4
Oatmeal Cookies	1/36 recipe	1½	1	2½
Doughnuts	1 average — 1/6 recipe	1½	5	6½
Macaroons	1/36 recipe	1	1	2
BEVERAGE				
Cider, sweet	180 grams — 6 oz. glass	4½		4½
Chocolate	6 oz. milk + 2 tbsp. sugar + 8 gms. choc.	4		4
Cola drinks	1 six oz. bottle	4		4
Grape juice, commercial	120 grams — ½ cup	4		4
Cocoa	6 oz. milk + 1 tsp. sugar + 1 tsp. cocoa	3		3
Eggnog	8 oz. milk — 1 tsp. sugar	3		3
Gingerale	1 six oz. bottle	3		3
Orange juice	120 grams — ½ cup	3		3
Pineapple juice	120 grams — ½ cup	3		3
Grapefruit juice, (unsweetened)	120 grams — ½ cup	2		2
CANDY				
Chocolate bar	43 grams — (7c size)	4½		4½
Chocolate fudge	30 grams — (15 pieces to lb.)	3½		3½
Chocolate mints	22 grams — (20 pieces to lb.)	3		3
Chocolate creams	13 grams — (35 pieces to lb.)	2		2
Butterscotch	5 grams — (1″ x 1″ x ¼″)	1		1
Marshmallows	76 grams — (60 pieces to lb.)	1		1
Chewing gum	1 cent stick	½		½
Life Saver	1 (the long contact is a danger)	⅓		⅓
Cough Drop	1 (the long contact is a danger)	⅓		⅓
DESSERTS				
Brown Betty	1/6 recipe + ½ cup milk	7	3	10
Jello	5 to 1 package — 1 serving	4½		4½
Custard	½ cup	4		4
Chocolate sauce	30 grams — 1 tbsp. thick, heaping	4		4
Ice cream	100 grams — ½ c. or 1 rounded scoop	3½		3½
Junket	½ cup milk	3		3
Cornstarch pudding	¼ recipe	2½	2	4½
FRUIT				
Rhubarb, stewed	120 grams — ½ c. sweetened	8½		8½
Peaches, canned, in syrup	215 grams — 2 halves — 3 tbsp. juice	8		8
Prunes, stewed	100 grams — 4-5 medium, 2 tbsp. juice	8		8
Fruit cocktail	120 grams — ½ cup	4½		4½
Dates	30 grams 3-4 stoned	4½		4½
Banana	100 grams — one 6″ long	4½		4½
Apricots, dried	30 grams — 4-6 halves	4		4
Currants, dried	30 grams — 2 tbsp.	4		4
Figs, dried	30 grams — 2 small	4		4
Apple sauce, no sugar	100 grams — ½ cup scant	2		2
JAMS, JELLIES, Etc.				
Honey	30 grams — 1 tbsp. level	5		5
Jam	20 grams — 1 tbsp. level	3		3
Marmalade	20 grams — 1 tbsp. level	3		3
Jelly	20 grams — 1 tbsp. level	2½		2½
Maple Syrup	20 grams — 1 tbsp. level	2½		2½
Oatmeal Porridge as served	¾ cup cooked + 1 tsp. sugar + ½ cup milk	2	3	5

Don't forget that a good brushing of the teeth within 10 or 15 minutes after eating will help to minimize the effects of the acid-forming bacteria.

My son Hannibal will be a great general, because of all my soldiers he best knows how to obey.—Hamilcar.

THE PREPARATION OF TANTALUM PLATES FOR THE REPAIR OF CRANIAL DEFECTS

by G. A. BUCHANAN, D.D.S., B.Sc. (Dent.)
Department of Veterans Affairs, Winnipeg, Man.

The dental service can be of material assistance to the neuro-surgeon in the preparation of a tantalum plate prior to the time of operation. Due to the difficulties encountered in shaping, at the time of operation, a plate which restores the symmetrical appearance of the head and which also secures an exact fit of the plate to the bone, it has been found impracticable to attempt the contouring of a large plate at the operating table.

The purpose here is to describe an indirect method of forming the tantalum plate which will fulfil all the requirements of good adaptation and correct contour. The plate can then be prepared in advance and be ready for the operation.

The various steps required in this indirect technique are as follows:—

(3) Impression of defect.
(2) Pouring of cast in dental plaster.
(3) The addition of modelling clay to the cast of the defect and to correct the appearance.
(4) Making a negative cast.
(5) Hammering of plate to fit negative cast.

Preparatory Steps

If the defect is located in the area of the scalp, the head should be shaved around the area of the defect and also around the corresponding area on the opposing side. X-rays are viewed to assist in determining the area and shape of bone loss, and the area of the defect is palpated to locate the margins of the bone. The outline of the plate is registered on the patient's skin or scalp by placing vaselined dental floss around the circumference of the defect, 9 to 10 mm. laterally from the edge of the bone. The area is again palpated in order to check if the outline is correct, and adjustments may be made by moving the floss until the correct outline is achieved. The dental floss may then be more firmly attached by a second application of a very small amount of vaseline applied throughout its length. If desired, prior to the application of dental floss, the outline may be marked with a skin, or china marking, pencil or some other marking which can be easily removed. In consultation with the neuro-surgeon the proposed outline is given a final check.

The patient is now ready for the impression. If the defect is in the parietal or temporal regions, the patient is seated in an upright position in the dental chair; if the defect is in the frontal area or superior occipital region it has been found more satisfactory to place the patient in a horizontal position on a table.

The face or head is draped with towels or two inch flannel bandage to mark off the areas to be shown in the impression. It is important, in taking an impression of the defect, to include the opposite corresponding area, in order to have a normal shape to copy in the correction of the defect.

Impression Material

In taking the impression, dental plaster may be used but it has been found that an agar compound is preferable for this type of work. It is accurate. It can be applied at a temperature of approximately that of the body and it causes the patient no discomfort. It is easily handled. It can be used without oiling the skin surface and it is easy to remove from the skin and from the finished cast.

The agar impression material preferred is one prepared from a formula by Clarke[1], and is mixed according to his directions. It contains the following ingredients:

Agar	4 ounces
Water	100 ounces
Borax or zinc oxide	1 ounce
Oxyquinoline sulphate	10 grains
Glycerin	1 ounce
Cellucotton	½ ounce
Cotton	15 grains
Rubber cement	4 ounces

Taking Impression

After the agar compound has been heated in a double boiler and thoroughly mixed, it is allowed to cool until it reaches approximately body temperature. The temperature can be tested by the application of a small portion to the back of the hand. A light coat is first applied by brush or spoon over the dental floss which outlines the area. More of the material is then applied to the defect area, following which a thin coat is spread over the rest of the surface to be duplicated in the cast. This first coat is of approximately one-eighth inch thickness and will set very quickly. A second application is then made to bring the thickness of the agar to approximately three-quarters of an inch. The setting of this thicker layer may be hurried by the application of a towel which has been soaked in chilled water. When the compound has thoroughly set, a quarter inch layer of plaster is then spread over the material to strengthen the impression and to prevent damage to the agar on removal. When the plaster has set, the impression is removed by lifting the edges to allow air to enter between the agar and the skin. On the removal of the impression, the dental floss comes away with the impression.

The Plaster Cast

The cast is poured in dental plaster. Before pouring, the dental floss outlining the defect is removed from the impression material. With removal of the floss a shallow trench is left in the agar material into which the plaster will flow. When the plaster is set, the agar material is removed from the cast and it will be noted that the border of the proposed plate is marked on the cast by a thin raised line of plaster. Fig. 1 illustrates three casts after separation from the impression material.

Building Up Proper Contour on Cast

Clay is then applied to the defect on the cast and moulded and carved to the correct contour to match the undamaged similar area of the opposing side. It has been found that plasticine is excellent for this purpose. The margin of the clay should not approximate the outline that has been previously registered on the cast but should be carried only to the edge of the defect and margin of the bone. This will allow the finished tantalum plate to contact the bone of the cranium to a distance of 9 to 10 mm. When the proper contour is achieved, a small

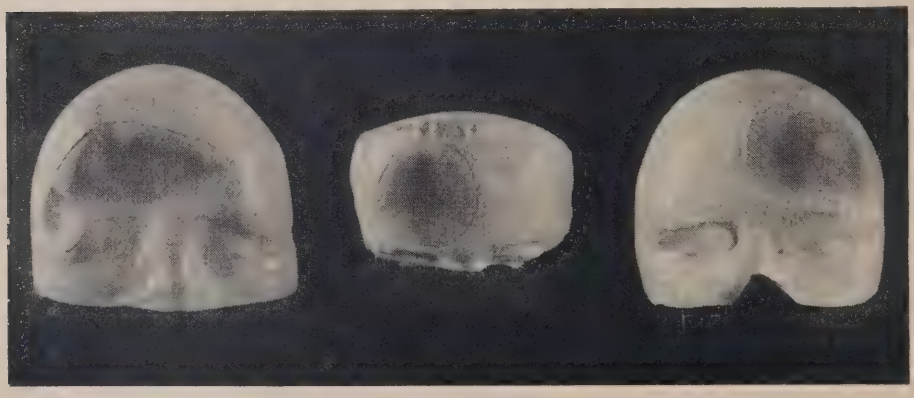

FIG. 1—Three casts showing a variety of defects in frontal areas.

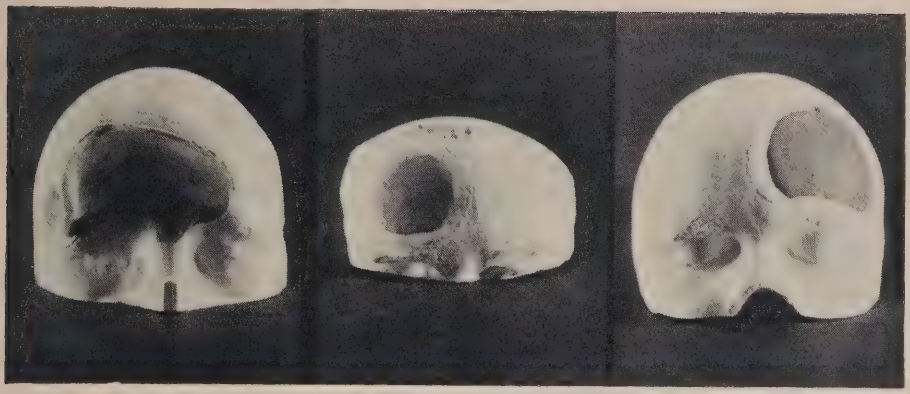

FIG. 2—Correction of defects with modelling clay.

FIG. 3—Negative cast poured in stone.

quantity of vaseline is rubbed over the surface of the clay and we are now ready for the reverse cast. Fig. 2 illustrates the three casts following the application and modelling of the clay.

The Negative Cast

The clay area and approximately one inch of the surrounding cast is then boxed with cardboard or x-ray film. It has been found satisfactory to prepare the boxing material from old x-ray film from which the emulsion has been removed with fixing solution or hot water. A separating fluid or soap is used on the plaster cast within the boxing material. The negative cast is poured in dental stone to a thickness of 1½ to 2 inches. This step is illustrated in Fig. 3.

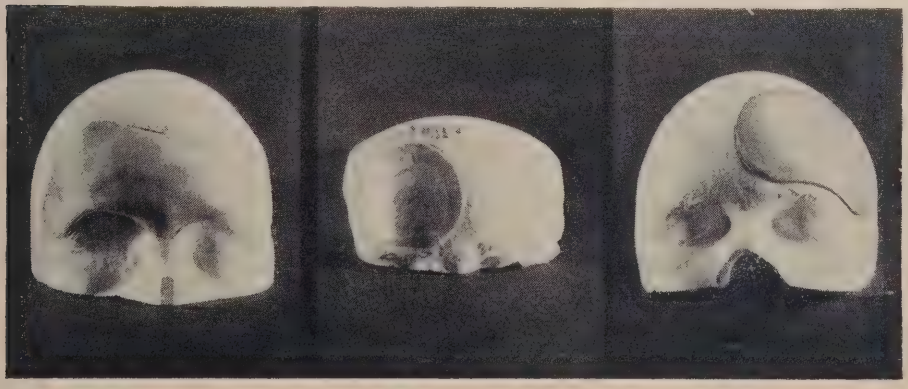

FIG. 4—Plates in position on casts.

When the negative stone cast has set, it is removed from the cast and this time the registered outline is shown as a narrow shallow trench. A pattern of the required plate is made with a thin sheet of wax. For this purpose red baseplate wax may be used and it is pressed into the reverse stone cast and trimmed to coincide with the registered margin. The wax is then flattened out and is used for a pattern to cut the .015 inch tantalum plate to shape.

Preparation of Plate

The plate is hammered, using an eight ounce ball peen hammer and a leather covered sand cushion or bag. The proper contour and fit is achieved by hammering the metal on the sand cushion with frequent transferring of the plate to the negative cast to check the fit. If necessary, the plate can be hammered direct to the negative stone cast. When the plate fits the negative cast it is tried on the plaster cast, and adjustment made if necessary. The

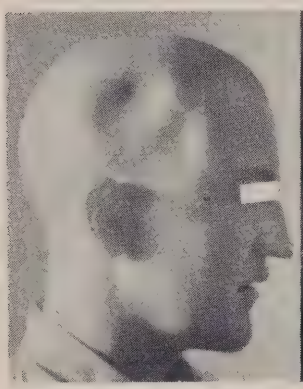

FIG. 5—Patient before operation.

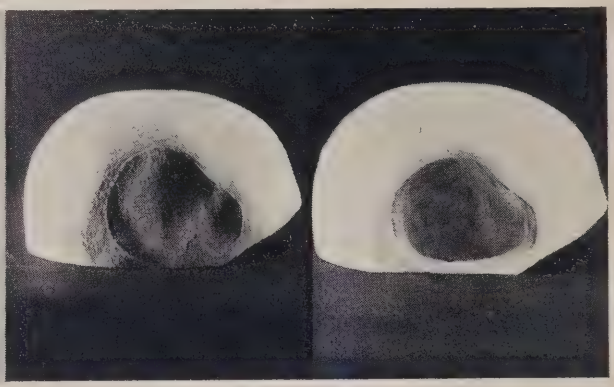

FIG. 6—Cast showing defect.

FIG. 7—Correction of defect with clay.

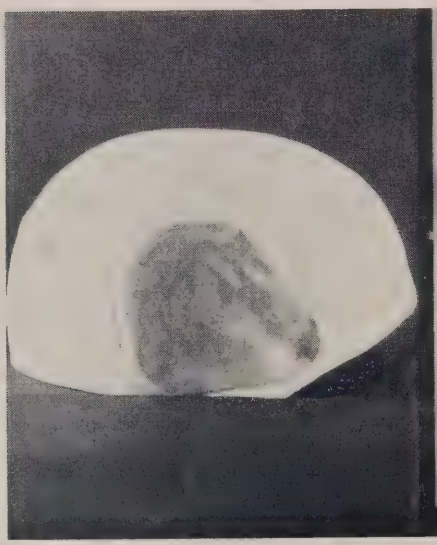

FIG. 8—Plate in position on cast.

FIG. 9—Patient 10 days following operation.

edge is then bevelled on a lathe stone, and the whole plate smoothed and polished.

Fig. 4 illustrates three tantalum plates fitted to the casts and ready for delivery to the operating room.

Figs. 5, 6, 7, 8, 9 illustrate a case Fig. 5 shows patient before operation. Fig. 6 shows cast of defect and normal side. Fig. 7 shows cast after addition and contouring of clay. Fig. 8 illustrates the finished plate fitted to the cast. Fig. 9 shows patient ten days after operation.

Holes for fixation of the plate may be made around the margin by a dental drill. It has been our procedure, however, to deliver the plate to the operating room without this preparation, as the surgeons at Deer Lodge Hospital prefer to plan the position of the holes and punch them at the time of the operation.

REFERENCES

(1) Clarke, C. D. Moulding and Casting. The John D. Lucas Company, Baltimore, page 42.

An Analysis of Questionnaire Submitted to Dental Profession in Saskatchewan–December, 1948

by A. E. CHEGWIN, D.D.S., Director of Dental Health, Province of Saskatchewan

CIRCULAR LETTER TO ALL DENTISTS IN SASKATCHEWAN, DEC. 13, 1948, PREPARED BY DEPT. OF PUBLIC HEALTH, DIVISION OF DENTAL HEALTH

Dear Doctor:

In order that some information of a general dental character may be obtained, I have compiled the following questionnaire. I would ask your cooperation in completing and returning the same at your convenience. You need not sign the form, as the information required is not intended to be at all personal.

1. Do you use sodium fluoride applications as a preventive measure in your practice?

2. If so, what would be the approximate number you would treat in a month?

3. Would you be in favour of a public organized and financed fluorine project similar to the mass immunizations carried out by Public Health authorities for scarlet fever, diphtheria, etc?

4. Do you use the x-ray (bite-wings) more or less routinely for detection of caries?

5. Does your practice routinely contain the children as well as adults of the families you consider your clientele?

6. Do you favour the routine use of local anaesthesia or analgesia in the operative work in your office?

7. In your opinion, is there any improvement or deterioration in the condition of the permanent dentition of present high school age patients under your care, as compared to the parents at a similar age?

8. What factor in your opinion is most likely to be responsible for dental neglect in the case of the average individual? (1) Economic (2) Fear of Pain (3) Indifference (4) Ignorance. Number foregoing in order of importance.

Thanking you in advance and extending the heartiest of good wish s for the Holiday Season.

Signed:—A. E. Chegwin, D.D.S.,
Director of Dental Health.

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A return of questionnaires amounting to 53 per cent was received which is considered a good average taking all factors into consideration.

Of this number 56 per cent were using sodium fluoride to some extent although the total number of patients treated per month would indicate only an average of slightly less than 4 patients per month per dentist were receiving treatment. On the face of

things it is doubtful if this average is maintained for the whole profession for the reason that those not sufficiently interested to answer the questionnaire can hardly be expected to be as much interested in this aspect of dentistry as those who did. Those interested and in favour of a publicly organized and financed fluorine project amounted to 73 per cent of the total returns. The question did not indicate how this mass project was to be carried out but of those who took the trouble to analyze and answer the question in detail a considerable number favoured the entrenched idea that only licensed dentists should apply the therapy. It should be pointed out that regulations may shortly be in effect approving the application of fluorine by licensed dental hygienists but the fact is that there are not now, nor are there likely to be for some considerable time to come, a sufficient number of such practitioners to even commence a project of mass immunization by the use of fluorine.

Bite-wing x-rays are in use by 62 per cent of dentists, making a return, for routine diagnosis of caries and 85 per cent claim to use a local anaesthetic or analgesia, routinely in operative precedures. Note summary of reasons for dental neglect.

The fifth question pertaining to dentistry for children of the families considered to be the permanent clientele of the dentist concerned, was not even summarized. The returns were almost unanimous, so it is evident that the modern concept of preventive dentistry stressing particularly the very young has not yet been generally accepted by the profession. The question was straightforward and no doubt the answers were intended to be so. Nevertheless it is the writer's experience, that in far too many cases dental care for the very young has been in the main prevention and elimination of pain, and very little restorative work has been undertaken insofar as deciduous teeth are concerned. This is confirmed very definitely in the December issue of the Canadian Dental Association Journal by Dr. G. Clarke of Ottawa in his timely and very excellent article on the survey of the Ottawa school clinics and subsequent conclusions.

If one who is a newcomer in the field of Dental Public Health may venture to make an observation, here it is, to the effect that the education of the profession along control and preventive lines will have to be as intensive as that which it is hoped to get over to the lay public. Unless the profession is prepared to present a unanimous front in this matter, then the whole idea so assiduously striven for by Dr. Harry Thomson and his associates in the Canadian Dental Hygiene Council for a quarter of a century, as well as that presented so definitely to the Federal Government by the Canadian Dental Association Committee on Dental Health Services, will be bound to end a dismal failure. The proportion of success will be in the ratio only of the proportion of the numbers of the dental profession who not only preach but practise the principles advocated. At a time when Dental Health has finally been recognized on the Provincial and Federal levels, the least one should expect from the rank and file is sympathetic understanding and loyal support. Never let it be said that when the General rushed over the top into the front ranks of his enemy, he found on looking around, only a thin scattering support behind him, and perished in a glorious but vain adventure.

Comparing the dental condition of today's teen-agers with that of their parents at a similar age 31 per cent claimed an improvement and 30 per cent a deterioration. Something funny here—surely we can get together on that. Scientifically there can only be three answers — no change, deterioration or improvement. Accurate surveys show deterioration; casual observation cannot seem to agree. No further comments are needed on this.

Summarizing the opinions of the

profession as to the factors leading to dental neglect, the results are as follows:

Indifference	266 points
Fear of pain	243 points
Economic	188 points
Ignorance	180 points

One could launch into a dissertation on this but it is considered unwise at the present time, suffice it to say that the answer is obviously again, intensive *Education* both of the public and the profession.

In conclusion it may be stated that the results of this survey naturally lead one to conjecture what may be the opinions of Mr. and Mrs. John Public. Such a survey is now being undertaken and although the writer is neither a prophet nor the son of a prophet it is our guess that the results could be startling and even possibly upsetting. More of this at a later date! This is not intended to be destructive criticism but merely an attempt to overturn the stone of indifference and possibly discover the golden coin of crusading integrity.

ANNOUNCEMENT

Program of the Convention

of The Canadian Dental Association in Co-operation with the Western Canada Dental Society in Bessborough Hotel, Saskatoon

SUNDAY, JUNE 5, 1949,

P.M.	2.00	Registration
	8.30	Reception and Registration

MONDAY, JUN 6,

A.M.	8.00- 9.00	Registration
	9.00-10.00	Opening Exercises
	10.00-11.15	Essayist—Ball Room—Dr. W. J. Pryor, Cleveland, Ohio Prosthodontia
	11.15-12.00	Exhibits—Pictures—Salons 1 - 6
	12.00- 1.45	Luncheon—Speaker
P.M.	2.00- 3.15	Group Clinicians—Pictures—Salons 1 - 6
	3.30- 4.45	Group Clinicians—Pictures—Salons 1 - 6
	5.00- 6.00	Exhibits
	5.00- 6.00	House of Delegates
	6.15- 7.45	Dinner
	8.00- 9.00	Essayist—Ball Room—Dr. J. C. Brauer, Pedodontist—School of Dentistry, University of Washington, Seattle. "The Children in Your Practice".
	9.00-10.00	Group Clinicians—Pictures—Salons 1 - 6

TUESDAY, JUNE 7,

A.M.	9.00-10.15	Essayist—Ball Room—Dr. P. G. Anderson, Faculty of Dentistry, University of Toronto. "Operative Procedures".
	10.30-11.45	Essayist—Ball Room—Dr. W. J. Pryor, Cleveland—Prosthodontia.
	12.00- 1.45	Luncheon—Speaker
P.M.	2.00- 3.15	Essayist—Ball Room—Dr. J. C. Brauer, Seattle—"Everyday Preventive Dentistry".
	3.30- 4.30	Group Clinicians—Salons 1 - 6
	4.30- 6.00	Exhibits—Pictures—Salons 1 - 6
	6.30-	President's Dinner—Dance.

WEDNESDAY, JUNE 8,

A.M.	9.00-10.15	Essayist—Ball Room—Dr. P. G. Anderson, Toronto—"Fixed Bridge Restorations".
	10.30-11.30	Group Clinicians—Salons 1 - 6
	12.00- 2.15	Luncheon—C.D.A. Annual Meeting—President's Address—Installation of Officers—Open Session—Presentation of Golf Awards.

GROUP CLINICIANS:

1. Dr. W. A. Quigley — Faculty of Dentistry, University of Alberta, Edmonton—"Correction of Anterior Cross Bites in General Practice".
2. Dr. W. G. McIntosh — Faculty of Dentistry, University of Toronto—"Periodontal Infections".
3. Dr. H. R. MacLean — Faculty of Dentistry, University of Alberta, Edmonton—"Operative Dentistry".
4. Dr. J. Passalis — Oral Surgeon, Winnipeg, Manitoba—"Principles of X-Ray Technique and Diagnosis as related to the Oral Field".
5. Final Arrangements Pending.

GOLF: There are numerous events and prizes, so come fully prepared. All competitions qualifying for prizes must be completed by 12 noon, Wednesday.

All arrangements are under the Chairmanship of Dr. F. Smith, 606 Canada Building, Saskatoon, Saskatchewan.

(Continued on next page)

ANNOUNCEMENT

Program of the Convention *(Continued)*

LADIES' PROGRAM

CANADIAN DENTAL ASSOCIATION — JUNE 1 - 5

GENERAL CONVENER.....Mrs. R. R. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
SOCIAL CONVENERS.....Mrs. R. V. Little & Mrs. F. G. Salisbury

THURSDAY, JUNE 2nd—Afternoon at the home of Mrs. F. G. Salisbury—(Assemble in Ladies' Lounge, Main Floor).

FRIDAY, JUNE 3rd—2:00 P.M. MOTOR TOUR OF CITY—(Assemble in Ladies' Lounge, Main Floor).
Buffet Supper at home of Mrs. L. D. Haselton.

SATURDAY, JUNE 4th—After 9:00 P.M.—COFFEE PARTY.

SUNDAY, JUNE 5th—PICNIC AT FORESTRY FARM.

GOLF BY REQUEST ANY DAY.

LADIES' PROGRAM

WESTERN CANADA DENTAL SOCIETY — JUNE 5 - 8th.

GENERAL CONVENER.....Mrs. R. L. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
REGISTRATION CONVENER.....Mrs. M. J. MacDonell
SOCIAL CONVENERS.....Mrs. L. D. Haselton & Mrs. N. F. Gropper

SUNDAY, JUNE 5th—Reception and Registration

MONDAY, JUNE 6th—Afternoon Tea at home of Mrs. E. B. Nagle—(Assemble in Ladies' Lounge—Bessborough Hotel).

TUESDAY, JUNE 7th—MOTOR TOUR BY REQUEST
Luncheon at 1:30 P.M. at Saskatoon Golf and Country Club. (Assemble in Ladies' Lounge—Bessborough Hotel).
7:00 P.M. BANQUET AND DANCE.

WEDNESDAY, JUNE 8th—11:15 A.M. LUNCH AT BESSBOROUGH HOTEL.

GOLF BY REQUEST ANY DAY.

It is not enough to say that we want to keep high ideals of medical service. We must see that whatever scheme is put forward does not tend to limit our usefulness by interfering with our professional freedom. What the layman wants is very simple. He wants medical care at the lowest possible cost. What the profession wants is to be allowed to do its work to the best of its ability. Between these two simplifications lie all the complexities of economics and political operations. The layman has to realize that no good system of medical care can be cheap. The profession must know that planning calls for some degree of control. The form and degree of that control is our problem.—From Editorial in Can. Med. Assoc. Jour. Jan. 1949.

An American woman journalist in China watched a Sister cleansing the gangrenous sores of wounded soldiers. "I wouldn't do that for a million dollars!" the visitor remarked.

Without pause in her work, the Sister replied, "Neither would I."—Maryknoll, The Field Afar.

The Forum

PRINCIPLES OF ORAL SURGERY

by DR. J. R. HAYWARD, Detroit, Michigan

Condensed from Jour. of Wisconsin State D. Soc., Sept., 1948

A great part of surgery troubles can be eliminated by adequate preparation and recognition of fundamental surgical principles.

Preparation calls for a clear preoperative diagnosis and logical treatment plan. When a surgical problem is at hand, the "chair time" spent in taking a history will be more valuable in avoiding trouble than the most clever operating skill. Snap judgments based only on clinical findings will prove both embarrassing and dangerous.

Examination of any proposed operative site in the jaws is groundless without correlation with accurate radiograms. Omission of preoperative x-rays before removing an apparently simple loose tooth is one short cut that no one can risk.

While evaluating the case history and results of the examination, we may apprehend symptoms or lesions which definitely contraindicate the surgical plan. Any hints of general pathological states such as: blood dyscrasia, syphilis, tuberculosis, uncontrolled diabetes and certain cardiac, pulmonary and renal diseases will demand close consultation and cooperation with the patient's physician. Local infection is the most common contraindication to surgery.

Although it has been condemned generally for many years the extraction of partially erupted third molars involved with paracoronal infection continues to hospitalize patients with severe bone and soft tissue infections. Local drainage and irrigation will eliminate much of the suppurative inflammation. Chemotherapy also assists in clearing up these infections so that extraction may be safely carried out. Rapid action barbiturates put nervous patients at ease and reduce reflexive responses.

Inadequate anaesthesia is responsible for many failures. It magnifies patient apprehension and causes the operator to hurry and to lose control of the situation.

In tooth removal there are two outstanding principles of technique, careful manipulation of soft tissue and judicious application of force. Flaps are indicated wherever soft tissue around teeth will be damaged by instruments, where removal of bone is necessary, or whenever a flap will provide better vision.

When preliminary efforts to loosen a tooth with elevators and forceps fail it is time to resist the temptation to lean on them. Either eliminate the impinging bone or divide the tooth for removal through the normal alveolus.

Much emphasis should be placed upon careful closure of operative sites after extractions. Although delivery of the last prized root tip is cause for rejoicing it should not relax one's attention to the important work which remains. It is important to protect sockets from the inflow of contaminating saliva until a good clot has formed. Even after simple extractions it is advisable to use a fine curette to examine the socket for fractured bits of buccal

or lingual plate or thin, interseptal bone which may sequestrate and delay healing. Sharp bone edges must be smoothed and ridge irregularities contoured for requirements of prosthesis. Local antibiotic drugs in sockets seem beneficial when they do not interfere with clot formation and are incorporated in the clot. Topical penicillin and sulphonamides have wide clinical use especially in chronically-infected bone areas.

Operative haemorrhage will be minimized by care in handling soft tissue and by complete removal of haemorrhagic granulation tissue. All operative haemorrhage must be completely controlled before discharge of the patient. Pressure with gauze sponges and careful suturing of flaps will provide soft tissue haemostasis. When one encounters persistent operative or postoperative bleeding, unexplained by blood dyscrasia, the topical haemostatic agents are very helpful. Of these absorbable materials, oxidized cellulose is very satisfactory and may be used with or without topical thrombin. This mechanical support to clot formation is superior to the transient action of epinephrin and other vasoconstrictors used in haemostasis.

All surgical procedures call for an explanation to the patient about the expected postoperative period and instructions to obtain comfort.

Recovery of oral surgery patients is often jeopardized by a poor state of nutrition. Patients may be undernourished before operation and prolonged post-operative periods on inadequate diets greatly handicap healing processes. Encouragement should be given to maintain a high protein, high caloric soft or liquid diet, fortified with vitamins and minerals.

When love and skill work together, expect a masterpiece.—John Ruskin.

"Well, the first time I noticed this little hickey on my elbow was last Tuesday—no, Wednesday—at Mabel Gordon's bridge party. I remember distinctly because I said to Eloise Faraday—she was Eloise Mitchell before she married Abner Faraday . . ."

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Editorials

COMPULSORY HEALTH INSURANCE

When a man repeats himself it is for one of two reasons; either he has nothing new to say that is worth listening to or he feels that what he said the first time was worth emphasizing by repeating the same. As I quote as follows from an editorial which appeared in this journal in May 1944, almost five years ago, I trust that the reason is for emphasis. "Isaac Bowman, President of the American Association for the Advancement of Science, speaks as follows. This may not be the most dangerous period of civilization in 2,000 years but most of us think it is one of the most dangerous. It is certainly the most complex. Every parochial condition is temporarily overshadowed. Two billion people are swept along in a single flood. All kinds of questions are asked about the future. The uncritical prophets are sketching an apocalypse that has more Hollywood than sense in it, or promising the earth and the fulness thereof to everybody, without troubling to look at the arithmetic of it. The critical spirit is having a hard time. On every hand men speak of uncontrollable elements in terms of 'I think' when they should say 'I guess'."

If this was applicable five years ago is it not still true today from a dental standpoint? Read again Dr. Campbell's enlightening paper and the letter sent to Canada from a prominent British dentist both of which appear in this issue of the Journal. Both of these writers refer to the dentist who by working long hours builds up gross results to which not only the govern-

ment objects but apparently even some dentists question. I would refer again to the May 1944 editorial quoting as follows: "Let us agree that the fee schedule will be adequate for the average practitioner. What is to be done about the energetic and efficient dentist, who with all the assistance which can be made available, works long hours and renders accounts to the government which will make government officials conclude that the fee schedule is too high? Are we just going to insist that the dentist, figuratively speaking, 'lays just so many bricks a day'?" This is just what is happening in Britain at present. Are we in danger of deteriorating from a profession to a trade union? However, without some control no set of fees which could be considered even moderately adequate will prevent some energetic men from building up gross amounts which the government will question. Of course it is misleading to quote gross amounts as has been done when the overhead in different offices varies so much. This is particularly so if the major part of the practice consists of denture service and this seems to be the practice in many British offices. It was to get away from the emphasis placed on denture service that the British government agreed to a comparatively high fee schedule for fillings etc. in order to encourage the practice of preventive dentistry so that the teeth might be saved rather than extracted. And yet this very gesture raises a problem when a British dentist, according to statement quoted in Dr. Campbell's paper, can earn $115.00 by giving prophylaxis and inserting 28 fillings in a three hour period on a Saturday afternoon. The taxpayer has to liquidate such accounts and no government is going to stand idly by and do nothing about it, no, not even if it can be shown that the dentist has worked 75 hours a week instead of the 33 recommended in the Spens Report.

Furthermore while all authorities have recognized the fact that dental care of the priority classes, namely children and expectant mothers, is most vital to the health of the people yet a prominent British officer has said that if the present drift away from the public dental service goes on at its present rate there will be no service left at all in the very near future. It is said that in London thirty-three per cent of the dental officers doing this preventive work have resigned, that there are twenty centres either wholly or in part without dental officers. Twenty more centres which London was hoping to open—new centres or centres which have been reconditioned and which are ready or almost ready for opening—cannot be opened because there are not public dental officers to do the work. "The reason is a question of money."

In the matter of periodontal treatment which is a most important part of all dental service, in the case of adults, one has reason to doubt whether anyone has, to date, been able to set a reasonable fee schedule. It is interesting to note that in the fee schedule recently agreed upon in the state of Illinois for care given to public assistance recipients and published in the January issue of this Journal that "prophylaxis shall be approved only when re-

quired for reasons of general dental health." In other words it would appear that one must develop some health problem before prophylaxis can be given and yet all restorative work in the mouth is dependent upon a healthy periodontium. Can any dental service be more important than keeping the supporting structures of the teeth in a condition of health?

As for Britain the dentists of that country may not like the action which may be taken by their government to correct these matters but remember it is as Dr. Gullett stated in his classic report on the "National Health Service Act of Great Britain," The whole scheme is one grand experiment in the realm of health services taking place in the social laboratory of Great Britain, and that its success or failure will have repercussions all over the world and that includes Canada.

Some form of socialized dentistry is sure to come to Canada sooner or later and we should be prepared to direct its development. One reason why the British dentists were unable to secure concessions which were obviously right and proper was because they were not united.

In Canada we dentists are united as far as our loyalty to the Canadian Dental Association is concerned but that loyalty has not yet taken on the practical aspect which will give our Association the power which is so necessary in times of crisis. We need not a man but men, broad visioned men, placed in the position where they can spend their working hours in the study of the principles, the applications and the whole gamut of socialized dentistry in its relation to human progress. New ideas should be carefully investigated with tireless effort arriving at a vital dynamic plan which will be acceptable not only to the people of Canada but to the members of the dental profession as well.

As a profession we are faced with greater problems than mere material concepts. No Empire can long endure which depends on such alone and neither can the dental profession. The ideals which we hold dear in our profession will survive and withstand the siege of battering days ahead if our plans are founded upon love and honour, truth and charity, purest faith and simple duty. Loyalty to a tradition is praiseworthy and there are few finer virtues but not when such traditions are kept alive by mute observance of outworn creeds but by an active faith forever seeking new truths and exploring new paths and with unchanging loyalty to the great ideals of which traditions are the shrine. To be loyal to a tradition, the soul of which has perished, is a sad predicament.

The Dental Profession of Canada can only find a secure foundation by strengthening as much as possible our national association, the only association in Canada which can possibly deal with these great socialistic problems which confront us with frightening possibilities. Let us hope that these facilities may soon be provided which can help save us from the perils of the times.

M. H. G.

ANNOUNCEMENTS

Ontario Dental Association Convention

The eighty-second Convention of this Association will be held at the Royal York Hotel, Toronto. The Convention commences May 15 with a Reception and Musicale. The Program for May 16, 17 and 18 includes Group Clinics, Table Clinics, Essays, Visual Education, and the Exhibitors' latest displays.

For further information contact the Secretary, 86 Bloor Street West, Toronto 5, Ontario.

Graduate Course in Orthodontics

A graduate course in Orthodontics, of one-year duration, given in the English language, will begin on September 15, 1949, at the Université de Montréal. As the number of candidates is limited to ten, applications should be mailed to:

DOCTOR PAUL GEOFFRION, *Vice-Dean,*
Head of Orthodontic Department, Faculty of Dental Surgery,
Université de Montréal, 2900 Mount Royal Blvd.,
Montreal (26), Que. Canada.

It's good to have money and the things that money can buy, but it's good, too, to check up once in a while and make sure you haven't lost the things that money can't buy.—George Horace Lorimer.

Great minds have purposes, others have wishes. Little minds are tamed and subdued by misfortune; but great minds rise above them.—Washington Irving.

The world is blessed most by men who do things, and not by those who merely talk about them.—James Oliver.

CORRESPONDENCE

British Dental Fees

Quotation from a letter of a prominent British dentist to an officer of the Canadian Dental Association.

"I was worried about our Scale of Fees which I had supposed as being in many items far too high. Dentists are paid monthly and December payments are not yet made out; but November is so high that more than one-third of our dentists are receiving cheques of over £400 for National Health patients.

"The whole matter is under urgent consideration by the government. All my forecasts have proved correct and I am rather sick of the whole thing as of course I cannot make public my advice which was not taken—nor can those who turned a deaf ear speak up now and say they rejected expert advice. I am made to look a fool.

"In due course things will I suppose come right but you can imagine I have a good deal of worry. If Canada ever goes in for State Dentistry try to get your Association to be realists. The policy of making exaggerated demands and false statements has been a foolish one bringing discredit on the whole profession."

BOOK REVIEWS

Review of Dentistry by Vincent R. Trapozzano, D.D.S., F.A.D.P. Editor, Professor of Prosthetic Dentistry, Head of the Prosthetic Department and Director of Postgraduate Division, Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania. 661 pages. Published by McAinsh & Co., Limited, Toronto. Price $7.50.

In this book will be found up-to-date questions, together with the proper answers, covering the various subjects making up the dental curriculum. The book constitutes a post-graduate course designed primarily for those preparing to take the examination of a licensing board but in reality furnishing a general review of dentistry today for the general practitioner.

Each chapter deals with one subject which has been prepared by an authority upon that particular subject. The questions and answers are concise, definite and explicit—characterized by brevity, yet containing the essential information. A review of dentistry it is and a splendid test for any practitioner who considers himself well-informed about his profession. The subject matter constitutes a compendium of practical information which every dentist should possess.

Some twenty-six authors, each a recognized authority in his subject, have been brought together to produce a unique volume. No attempt has been made to produce an encyclopaedia of dental knowledge but rather an endeavour has been made to include in one volume pertinent subject matter closely related to dental practice. Undoubtedly, the book will prove most useful to those preparing for licensing examinations. Any practitioner will find the question and answer form of presentation attractive and interesting.

D. W. GULLETT

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A Text-Book for Dental Assistants by Irwin Robert Levy, D.D.S., formerly: Director, American Training Institute; Chief of Dental Clinic, Big Sisters Organization; Assistant Dentist, Mt. Sinai Hospital, New York City. Second Edition, thoroughly revised, with 226 illustrations. Canadian Publishers, MacMillan Company, Toronto. Price $4.50.

This book is intended as a text in training the new dental assistant and to be used as a handbook by the experienced assistant. It gives a detailed outline of chairside assisting and dental office management as related to the assistant. In addition to the duties of an assistant it gives a very clear discussion of dental practice which background is most helpful if the assistant is to do her best. Chapters on Dental Anatomy, Sterilization, Dental Radiology, Oral Surgery, Periodontia, Pedodontia, Models, Casts and Inlays and Crowns lead the assistant through the intricacies of dental practice. In each case, Dr. Levy shows how the assistant can be a real help in the particular operation under discussion. The following examples picked at random give an idea of the thoroughness of the work. Under Chairside Assisting—Dr. Levy says, "Women who use cosmetics should, upon being seated, be asked to remove their lip rouge. This can be done tactfully, if you will hand them a piece of facial tissue, smile pleasantly, and say 'For your lips please'." Under the subject of Radiology, Dr. Levy emphasizes two things which some operators and assistants are prone to forget. "1. Do not stand in the direct line of the rays while the machine is in operation. 2. Never hold the film in the patient's mouth". A very useful dictionary containing 1,500 commonly used dental terms is appended. This book is an excellent help to any new dental assistant but should be read by the dentist as well if the most use is to be made of the ideas contained because the dentist and his assistant must act as a team.

KENNETH M. JOHNSON

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Conduction, Infiltration and General Anaesthesia in Dentistry by Mendel Nevin, D.D.S. Former Oral Surgeon Greenpoint Hospital also Hospital Deformities and Joint Disease; Consultant Anaesthetist Ocean Hill Memorial Hospital; and P. G. Puterbaugh, M.D., D.D.S., Professor of Principles of Medicine and Anaesthetics and Associate Professor of Oral Surgery, Chicago College of Dental Surgery; President of the Odontological Society of Chicago and President-elect of the Odontographic Society of Chicago. Revised. 228 engravings and large trigeminal nerve

chart. Published by Dental Items of Interest Publishing Co., Brooklyn, N.Y. Price $7.50.

This is the fifth edition and the 15th printing of the book, some 30,000 copies having been sold since the first edition came off the press which speaks for itself as far as the popularity of this publication is concerned. There has been little change in technique since the appearance of the fourth edition in 1938 but the introduction of the biotics has modified the application of local anaesthetics so that a new chapter has been added on "Local Anaesthesia with Penicillin." A description of co-medication in local anaesthesia has also been added. The chapters on complications, postoperative and preoperative treatment, pharmacology of drugs used in local anaesthesia, armamentarium, restoration measures and questions and answers have been revised and enlarged.

This is a subject which every dentist should master since so many people still stay away from the dentist on account of fear.

This book is well written and very practical and should prove most valuable as a text book on this subject.

M. H. G.

ROYAL CANADIAN DENTAL CORPS NEWS

The Reserve Force R.C.D.C. offers an excellent opportunity for the eligible dentists of Canada to make a worthy contribution to their country and profession. Not only does it give one a chance to engage in an extra-office activity which is pleasant, wholesome and away from office routine, but it is also beneficial due to the fact that an officer draws the pay of his rank for all of his time so expended. Gone are the days when the Reserve Force Officer was required to outfit himself, donate his meagre pay to regimental funds and make contributions from time to time from his personal finances to pay necessary expenses for the welfare of his unit.

Eight Reserve Force Companies are established across Canada. The location and name of the Commanding Officers are as follows:

1 Coy.—Lt.-Col. C. L. Strachan, Wolsely Barracks, London, Ontario.

2 Coy.—Lt.-Col. G. L. Frawley, Room 206, University Ave. Armouries, Toronto, Ontario.

3 Coy.—Lt.-Col. K. C. Berwick, 3626 St. Urbain St., Montreal, Quebec.

4 Coy.—Lt.-Col. A. Moisan, Maple Leaf Drill Hall, D'Youville Square, Quebec, P.Q.

5 Coy.—Lt.-Col. W. G. Dawson, The Armouries, Halifax, Nova Scotia.

6 Coy.—Lt.-Col. J. E. Abra, U. of Manitoba C.O.T.C. Building, Winnipeg, Manitoba.

7 Coy.—Lt.-Col. W. H. Smith, 278 Sparks St., Ottawa, Ontario.

8 Coy.—Lt.-Col. F. A. Smith, HQ. B.C. Area, Vancouver, British Columbia.

Officers of these companies may be attached to formations of the R.C.N., Cdn. Army and R.C.A.F. This provides an opportunity for learning the organization and administration of all the Armed Services. At the same time, through the training program of the R.C.D.C. they will be instructed in Corps training, i.e., R.C.D.C. organization and administration, documentation, indenting, maintenance and supply of dental equipment, etc.

At present officer vacancies exist in several of these companies. It is proposed to fill these vacancies by C.O.T.C. graduates when available.

Dentistry has been granted recognition in the Active and Reserve Armed Services of Canada. The record of the Dental Service in war has been second to none but the active support and cooperation of every member of the profession is necessary to maintain the confidence we have been accorded. The Officer Commanding the Dental Company in your area will appreciate your assistance.

A friend may well be reckoned the masterpiece of Nature.—Ralph Waldo Emerson.

There is no duty we so much underrate as the duty of being happy.—Robert Louis Stevenson.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

The Dental Students' Register 1948-49

The issue of the Dental Students' Register for this year shows an increase of 90 students in attendance at the dental schools over the number reported last year. The total number of students (1012) is the largest number attending Canadian dental schools up to this time. This number may be the highest for some years to come due to the fact that the schools are now admitting more normally sized classes.

The approximate number of graduates in 1949 will be 180. In addition a few Canadian students will graduate at schools in the United States, particularly from British Columbia. As a consequence, the total number of additions to the profession will be approximately 190. By comparison the losses of the profession by way of death and retirement during recent years has been for 1945—93; 1946—147; 1947—176.

Graduates during 1948 from Canadian schools numbered 99 which was the lowest since 1941. This was due to the fact that the school at Toronto had no regular graduating class, owing to the accelerated plan carried out during the war. Of these 99 graduates only one was a woman.

Four out of the five schools are giving consideration in respect to the establishment of a school for dental hygienists.

TABLE 1

Total Enrolment of Undergraduate Students in the Dental Schools of Canada as of January 3rd, 1949

University	Freshman	Sophomores	Juniors	Seniors	Men	Women	Totals
Dalhousie University	12	12	11	6	40	1	41
McGill University	35	41	36	34	144	2	146
University of Montreal	60	63	56	45	222	2	224
University of Toronto	82	152	169	75	474	4	478
University of Alberta	27	25	51	20	122	1	123
Totals	216	293	323	180	1002	10	1012

TABLE 2

Maximum Number of Undergraduate Students that can be Accommodated in a Regular Class in Your School

Dalhousie University	12
McGill University	35
University of Montreal	60
University of Toronto	75
University of Alberta	25 (to 30)
Total	207 (to 212)

TABLE 3

Recapitulation of Undergraduate Enrolment in the Dental Schools of Canada 1939-1948 Inclusive

School	1939–1940	1940–1941	1941–1942	1942–1943	1943–1944	1944–1945	1945–1946	1946–1947	1947–1948	1948–1949
Dalhousie University	36	31	25	25	22	28	27	38	37	41
McGill University	60	58	61	67	67	51	73	111	127	146
University of Montreal	90	104	118	139	154	162	184	188	208	224
University of Toronto	222	210	232	270	255	264	180	340	435	478
University of Alberta	56	51	49	53	24	34	54	108	115	123
Totals	464	454	485	554	522	539	518	785	922	1012

TABLE 4

Total Number of Graduates During the Years 1939-1948 Inclusive

School	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Dalhousie University	15	12	7	8	11	6	8	0	10	9
McGill University	17	13	18	9	26	12	13	5	18	15
University of Montreal	16	23	14	31	18	37	30	41	36	38
University of Toronto	49	56	45	40	103	61	58	56	75	24
University of Alberta	18	13	13	32	8	24	7	0	10	13
Totals	115	117	97	120	166	140	116	102	149	99

For the Year 1948

	Male	Female
Dalhousie University	9	0
McGill University	15	0
University of Montreal	37	1
University of Toronto	24	0
University of Alberta	13	0
	98	1

TABLE 5

Distribution of Undergraduate Students by Provinces & Foreign Countries in the Dental Schools of Canada as of January 3rd, 1949

	Pr. Edw. Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Brit. Columbia	Newfoundland	United States	Br. West Indies	Europe	South Africa	China	Totals
Dalhousie University	5	22	9					1		3	1					41
McGill University	5	5	8	58	14	5	13	5	15	2	7	9				146
University of Montreal	1	5	10	186	5	2	3				8		4			224
University of Toronto		1	1	2	378	21	32	8	29		1		1	2	2	478
University of Alberta					1	4	30	71	17							123
Totals	11	33	28	246	398	32	78	85	61	5	17	9	5	2	2	1012

TABLE 6

Additional Students

	Dalhousie University	McGill University	University of Montreal	University of Toronto	University of Alberta	Totals
Graduates during 1948	0	0	4	12	0	16
Post-graduates during 1948	0	0	85	34	0	119
Dental Nurses 1948-49	0	0	0	24	0	24
Is course for Dental Hygienists being planned?	not at present	yes	yes in near future	yes, date not determined	being considered	

The term "graduate" means proceeding to a degree.

The term "post-graduate" means taking a course other than proceeding to a degree.

Income Tax Information

Quarterly Returns

Individuals whose income—(a) is derived from carrying on a business or profession (other than farming); (b) is derived from investments; or (c) is more than 25% derived from sources other than salary or wages, are required to pay their estimated tax by quarterly installments during such year. Each payment must be sent in with Installment Remittance Form T.7-B Individuals. Any balance of tax is payable with interest with the T-1 General return which is due to be filed on or before April 30 of the succeeding year.

The following timetable indicates the returns required during 1949:

A. Dentists NOT receiving salaries amounting to three-quarters of income:

Date Due	Forms to be Used
March 31, 1949	T.7-B Individuals, 1949
April 30, 1949	T.1-General, 1948
June 30, 1949	T.7-B Individuals, 1949
September 30, 1949	T.7-B Individuals, 1949
December 31, 1949	T.7-B Individuals, 1949

B. Dentists receiving salaries amounting to three-quarters or more of income:

Date Due	Forms to be Used
April 30, 1949	T.1-General, 1948
Whenever status is changed	T.D-1

Dentists who pay salaries to their own employees should send in Form T.-4 by the end of February each year.

As a matter of guidance to the dental profession and to bring about a greater uniformity in the data to be furnished to the Taxation

Division of the Department of National Revenue in the annual Income Tax Returns to be filed, the following matters are set out:

Income

1. There should be maintained by every member of the dental profession an accurate record of income received, both as fees from his profession and by way of investment income. The record should be clear and capable of being readily checked against the return filed. Records should be maintained in books kept for the purpose.

Expenses

2. Under the heading of expenses the following accounts should be maintained and records kept available for checking purposes in support of charges made:

(a) Dental and like supplies;

(b) Office help, nurse, maid and bookkeeper; laundry and malpractice insurance premiums. (It is to be noted that the Income War Tax Act does not allow as a deduction a salary paid by a husband to a wife or vice versa. Such amount, if paid, is to added back to the income);

(c) Telephone expenses;

(d) Assistants' fees;

The names and addresses of the assistants to whom fees are paid should be furnished on or before the last day of February in each year on Income Tax Form known as T.4, obtainable from the Inspector of Income Tax. (Do not confuse with individual return of income, Form T.1, to be filed on or before 30th April in each year);

(e) Rentals paid;

The name and address of the owner (preferably) or agent of the rented premises should be furnished. (See (h));

(f) Postage and stationery;

(g) Depreciation on dental equipment;

The following rates will be allowed provided the total depreciation already charged off has not already extinguished the asset value:

Instruments — instruments costing $50 or under may be taken as an expense and charged off in the year of purchase;

Instruments costing over $50 are not to be charged off as an expense in the year of purchase but are to be capitalized and charged off rateably over the estimated life of the instrument at depreciation rates of 15 per cent to 25 per cent, as may be determined between the practitioner and the Division according to the character of the instrument, but whatever rate is determined upon will be consistently adhered to;

Office furniture and fixtures—10 per cent per annum;

(h) Proportional expenses of dentists practising from their residence—

(a) owned by the dentist;

Where a dentist practises from a house which he owns and as well resides in, a proportionate allowance of house expenses will be given for the study, laboratory, office and waiting room space, on the basis that this space bears to the total space of the residence. The charges cover taxes, light, heat, insurance, repairs, depreciation and interest on mortgage (name and address of mortgagee to be stated);

(b) rented by the dentist;

The rent only will be apportioned inasmuch as the owner of the premises takes care of all other expenses.

The above allowances will not exceed one-third of the total house expenses or rental unless it can be shown that a greater allowance should be made for professional purposes.

(i) Sundry expenses (not otherwise classified)—

The expenses charged to this account should be capable of analysis and supported by records.

Claims for donations paid to charitable organizations will be allowed up to 10 per cent of the net income upon submission of receipts to the Inspector of Income Tax. This is provided for in the Act.

The annual dues paid to governing bodies under which authority to practise is issued and membership association fees not exceeding $75, to be recorded on the return, will be admitted as a charge.

The cost of attending post-graduate courses or dental conventions will not be allowed.

(j) Carrying charges;

The charges for interest paid on money borrowed against securities pledged as collateral security may only be charged against the income from investments and not against professional income.

(k) Business tax will be allowed as an expense but income taxes will not be allowed.

(l) Automobile expense;

Taxi fares incurred for purely professional purposes will be allowed. The expenses including depreciation in respect of a personally owned car will not be admitted.

(m) Effective 1st January 1948, the reasonable expenses incurred by members of the dental profession in attending the following Dental Conventions will be admitted for Income Tax purposes against income from professional fees:

1. One Convention per year of the Canadian Dental Association.
2. One Convention per year of a Provincial Dental Association.
3. One Convention per year of a Dental Society or Association of Specialists in Canada or the United States of America.

The expenses to be allowed must be reasonable and must be properly substantiated; e.g. the taxpayer should show (1) dates of the Convention, (2) the number of days present, with proof of claim supported by a certificate of attendance issued by the organizations sponsoring the meetings, (3) the expenses incurred, segregating between (a) transportation expenses, (b) meals and (c) hotel expenses, for which vouchers should be obtained and kept available for inspection.

None of the above expenses will be allowed against income received by way of salary since such deductions are expressly disallowed by statute.

Dentists Under Salary Contract

3. A salary is considered as "net" for Income Tax purposes. The salary of a Dentist is therefore taxable in full without allowance for membership fees or annual dues to governing bodies, and other like expenses. If the contract with his employer provides that such expenses are payable by the employer, they will be allowed as an expense to the employer in addition to the salary paid to the assistant.

(A ruling has been obtained that persons whose income is derived from salary may claim as a deduction for income tax purposes fees paid to the licensing or governing body necessary to maintain them in good standing for purposes of their employment. This ruling applied to salaried dentists permits the deduction of the annual fee paid to the provincial licensing body.)

COMMENT

In view of the many inquiries received in respect to the deduction allowed for attending conventions a further explanatory statement is made as follows:

General practitioners may claim deductions for TWO CONVENTIONS ATTENDED during the year 1948 WHICH MUST BE (1) A convention of the Canadian Dental Association, (2) ONE convention of a Provincial Dental Association.

Recognized specialists in a recognized specialty in dentistry may claim, in addition to the above said conventions, deduction of expenses incurred in attending a convention in the United States of America of Specialists in the specialty of which the specialist is a recognized member.

The certificate of attendance issued by the Secretary of the Association, under whose auspices the convention was held, must accompany your income tax return in order to claim such deduction. Vouchers for such expenses are to be kept on file by the dentist concerned for inspection purposes.

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Articles on Dentistry in Periodicals

Many articles have recently appeared in the press and periodicals in respect to several phases of dentistry. For the most part these articles have been concerned with fluorine. The result has been gross exaggeration in the public mind of the efficacy of fluorine as a preventive treatment. The interpretation of scientific statements made on the subject has been such that many people are convinced that with a few applications of the treatment, future dental care can be forgotten. Furthermore, the members of the profession are now accused of selfishly refusing to render this perfect preventive treatment lest they do themselves out of a job. Such incidents have occurred in other branches of the health sciences, and quite probably, time and experience will be the only factors which will level off public opinion.

Dentists can now expect another flurry of excitement as a result of the article which appeared in the issue of *Collier's* magazine, January 8 last, based on Dr. Bernard Gottlieb's theory of the cause of dental caries and on his "impregnation treatment," as a preventive procedure.

Two other periodicals of current issue have

articles filled with half-truths which attempt to place the dental profession in a false position.

The January issue of *Cosmopolitan* magazine attempts to expose "sensational" shortcomings in dental practice. The article is based upon alleged differences in diagnosis for the same patient by different dentists, and on "discrepancies" in fees quoted.

The February issue of *New Liberty* carries an article which contains many mis-statements of facts and leaves an inference that the dental profession is derelict in duty towards the younger generation.

New Poster Issued

The Dental Health Division of the Department of National Health and Welfare has issued a new poster entitled "From First to Last". This poster, and other educational material produced for the Dental Health Division, can be obtained from your Provincial Department of Health upon request.

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Requirements for the Approval of a Dental School

The Council on Dental Education has now issued a statement on the Minimum Requirements for the Approval of a Dental School. After a lengthy study, the Council submitted the statement for approval at the meeting of the Board of Governors held last June, at which time the statement was adopted. The statement has now been published in pamphlet form for distribution. Single copies are available upon request.

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Resolution Passed by Manitoba Dental Association

The Secretary of the Manitoba Dental Association has submitted the following resolution, which was passed without opposition at the annual meeting of the said Association held in December last.

> "Recognizing the extreme importance of the work being done by the Canadian Dental Association and realizing the urgent need for greatly increased financial support the Manitoba Dental Association will contribute $10.00 per capita to the C.D.A. for 1948 and commencing in January, 1949, will make an annual contribution of $25.00 per capita."

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Report on Dental Education and Licensure in Great Britain

At a meeting of the Council on Dental Education held in Montreal, April 1948, the Secretary was requested to investigate dental education, while in Great Britain. As a result, a report on Dental Education and Licensure in Great Britain was presented at the recent meeting of the Council on Dental Education held in Montreal. Requests for single copies will be supplied until the present supply is exhausted.

NEWS FROM THE PROVINCES

MANITOBA

Winnipeg Dental Society

On the 4th of February this Society had the privilege of a visit from Dr. A. J. O'Neil of Edmonton to clinic on "The Principles and Technique of Mucostatic Impressions." Dr. O'Neil devoted most of his afternoon and evening allotment of time to driving home the principle of his subject. According to the mucostatic theory surface tension is the strong force in nature upon which denture stability relies rather than the commonly accepted belief that atmospheric pressure is responsible for adhesion.

Dr. O'Neil's principles of the mucostatic concept are something like this: (1) Atmospheric pressure has nothing to do with the retention in position of a denture. (2) Muscle trimming serves no purpose at all in retention. (3) Tissues cannot be compressed by any procedure yet devised by dentists. (4) No distinction can be made between so-called hard and soft tissues in the construction of a denture. (5) Overextension of the denture base should be avoided.

Dr. O'Neil gave little time to a technique explanation or demonstration. He has travelled extensively across the continent south of the 49th parallel investigating techniques I imagine and worked out his own to suit himself and advises every dentist to work out his own. It takes infinite patience and practice accompanied by many failures to achieve success but having done so the rewards include the satisfaction of having served the eden tulous unfortunates.

The meeting was well attended and presided over by Dr. Ivan Jackson, President of the Society and incidentally one of Winnipeg's champion ski jumpers.

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Winnipeg Dental Nurses' and Assistants' Association

Dr. E. L. Ross, Medical Director of the Sanitarium Board of Manitoba was the guest speaker at the February 14 meeting of this Association. Dr. Ross reviewed the history of tuberculosis, the diagnosis, treatment and the rehabilitation of the cured patients.

F. JEFFREY

ONTARIO

Cancer Control Lectures University of Toronto

On January 12, Dr. Hamilton B. G. Robinson, Professor of Oral Pathology and Diagnosis at Ohio State University, presented the opening lecture in a group on "Oral Diagnosis and Cancer Control." This series was sponsored by the Faculty of Dentistry, University of Toronto and the Toronto Academy of Dentistry.

Dr. Robinson was well qualified to speak on this subject as he is editor of both the Journal of Dental Research and of the American Academy of Oral Pathology.

In his illustrated lecture he stressed the necessity of making an early diagnosis of all oral lesions and, in order to arrive at a correct interpretation, an accurate clinical description, together with a complete case history are essential. These, in conjunction with a biopsy report will establish the correct diagnosis. He made a particular point of stressing the value of taking a biopsy whenever there was any doubt as to the nature of the lesion.

To emphasize the main points of the lecture he presented a group of about one hundred coloured slides that showed both the gross clinical appearance and the microscopic character of many conditions typically found in and about the oral cavity, including examples of inflammatory, granulomatous and neoplastic nature.

In closing, he reiterated the keynote of the whole lecture, "When in doubt, take a biopsy."

This was followed a week later by a paper presented by Dr. Dan Bellanger, Director of Dental Services, Henry Ford Hospital, Detroit. His subject, "Affections of the Oral Mucous Membranes," included the recognition and surgical treatment of oral lesions dealing in the main with neoplastic and pre-neoplastic growths. A pertinent phase of his presentation was the importance and method of taking a section of the lesion for biopsy. He suggested that the entire tumour or at least a large segment of it should be removed and placed in a 10% solution of formalin in water, or in a physiological salt solution.

He felt keenly that much pre-neoplastic tissue is caused by faulty oral hygiene and rough or jagged tooth surfaces. The role of the dentist, he concluded is essential in recognizing, investigating and eliminating all possible causes of these lesions.

Dr. W. L. Robinson, Associate Director of Applied Pathology, University of Toronto, and Dr. H. M. Worth, Radiologist at Toronto General Hospital, Wellesley Division, and lecturer in Radiography in the Faculty of Dentistry, combined in an excellent presentation for the third lecture in the series. Alternately, Drs. Robinson and Worth discussed the pathological and radiographic appearances of all neoplastic growths illustrating each type with well chosen slides. First, cysts of different types and causes were presented, followed by discussions of benign and malignant tumors. Both lecturers placed the onus on the dentist in recognizing these lesions since he is almost always the first to see them in their primary stages.

Dr. Harold Wookey, Associate Professor of Surgery, University of Toronto, presented the final lecture on treatment of cancerous growths of the mouth and jaws. Dr. Wookey illustrated accepted principles in the surgical technique of removing malignant tumours and also the value of radiation, the latter particularly for soft tissue lesions. Using fifty or more coloured slides and a motion picture made by himself on the resection of a maxilla for a 20-year-old boy, he impressed his audience with the value of early diagnosis and the good possibility of cure for some of these cases. The dentist can often restore lost facial contour with prosthetic appliances adding greatly to the final appearance of the patient.

This series of four lectures was so well attended and so favourably received by both

Medicine and Dentistry that plans are already being considered for a future series next year on another important subject linking the two professions.

R. W. MARSHALL

▪

Dental Surgery for Jews Pledged

A complete dental office for a needy Jewish community in Europe has been pledged by the Toronto alumni chapter of Alpha Omega Fraternity, national dental society.

An appeal to local manufacturers and suppliers is expected to yield the needed supplies. These will include a chair, dental unit, overhead lights, sterilizers, instruments, instrument trays and supplies.—*Globe and Mail.*

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Kingston & District Dental Association

At the January 19 meeting of this Association Dr. G. C. Hare of the University of Toronto spoke on root-canal therapy and resection.

•

The Toronto Study Club of Dental Technicians

The monthly meeting of the Toronto Study Club of Dental Technicians was held on Wednesday, January the Nineteenth, the setting for this meeting, a Dental Laboratory operated by two members of the Study Club.

Mr. Posen and Mr. Furie invited the Toronto Study Club to hold their meeting at their new laboratory, and at the same time give the club members an opportunity to see their new premises.

The evening was opened with a tour of the Laboratory with Mr. Posen explaining the layout of the department and offices. At the conclusion of the tour the regular meeting was called after which refreshments were served through the courtesy of Mr. Posen and Mr. Furie.

The evening passed all to quickly and it was a pleasure to visit with Mr. Posen and Mr. Furie, we all join in wishing our fellow members success in their new establishment.

C. BLANDFORD
Registered Dental Technicians
Publicity Chairman

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Halton Dental Society

At the newly organized Halton Dental Society in January the following officers were elected: President, Dr. F. M. Deans of Oakville; Vice-President, Dr. F. E. Babcock of Milton; Sec.-Treas., Dr. J. B. Milne of Georgetown.

▪

Ladies Auxiliary
Academy of Dentistry, Toronto

Mrs. A. F. Cooper, President of this organization presided at the January luncheon held at the "Chez Paree". The Program for this meeting was arranged by the North Group and the convener, Mrs. R. G. Ellis, introduced the guest speaker, Mrs. Mary Dally McCullough. Her subject was "These chang ing Fashions." In appreciation of a mos humorous and informative talk Mrs. C. Sullivan thanked Mrs. McCullough and presented her with a Belleek China Bowl.

DAISY E. PATERSON,
Press Convener

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Notice to Ex-Dental Officers, Ontario

All ex-Dental Officers now in Ontario are reminded that plans are being made for the Third Annual get-to-gether at the Ontario Dental Association meeting in May.

Membership cards are being mailed for the current year, and your executive solicit your support, so that we may strengthen the membership of the Defence Dental Association of Canada, by joining the Ontario Branch.

Further details for this year's reunion will appear in a later issue of "The Journal".

R. C. MCLAUGHLIN,
Secretary.
Ontario Branch, D.D.A. of Canada

▪

War Memorial Committee

The above Committee is attempting to prepare an accurate record of graduates of the Faculty of Dentistry, University of Toronto, who lost their lives in the war of 1939-1945.

It would, therefore, be sincerely appreciated if anyone having knowledge of these men would send the information to this Committee.

Address communications to War Memorial Committee Faculty of Dentistry, 230 College St. Toronto.

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Dental Alumni

The Annual meeting of the Dental Alumni University of Toronto will be held at the Boulevard Club, Sunnyside on March 24 at 7 p.m. Dinner and entertainment including a speaker will be the program. Members are invited to bring their ladies. Single tickets $2.00.

A. R. KERR

Toronto Curlers Guests at Hamilton

A group of enthusiastic Hamilton Curlers took on three Toronto rinks for a friendly game on the Thistle Club ice, February 12 last. There were two rinks from the Toronto Curling Club and one from the Granite Club —no they were not stacked rinks but they did give a good performance at least to the extent of holding their own.

Dr. "Gerry" Phillips was the organizer of the event in Hamilton and Dr. "Vic" Morton rounded up the Toronto group. After a good afternoon curling, an excellent fried chicken dinner was served with all the "fixings and trimmings" and kibitzin'. Anyway everyone had such a good time Skip Vic Morton invited the Hamilton gang back to Toronto for a return game on March 12 on the Toronto Curling Club ice.

Some one said "How about a dental bonspiel next year? Well, you never know, at least it is an idea and it would be fun.

Here are the personnel of the rinks:

Jack Carroll	T. R. Marshall
Lloyd Serena	Glen Pilkey
Wallace Baxter	Vic Morton
Art Poag (*Skip*)	Chas McKenna (*Skip*)
Dave Shultis	J. McLaurin
Carl Moyle	Lou Harris
Lorne Janes	Syd Woollatt
Bill McEwen (*Skip*)	Jack Duff (*Skip*)
Dwight Coons	Frank Cole
Holly Dyer	"Mac" Sheldon
Cliff Mason	Howard Graham
Gerry Phillips (*Skip*)	Bert Diprose (*Skip*)

QUEBEC

Montreal Dental Nurses' and Assistants' Association

The December meeting of this Association was held at the Queen's Hotel in the form of a Christmas Dinner. It was well attended and the members are grateful to Dora Good and Pat Sper for making it a party to remember, also to Francine Forget and Madeline Lafabvre who led the sing-song.

Dr. Robert M. Wiener was the guest speaker at the January 10 meeting which was held in the Mount Royal Hotel. Dr. Wiener who recently resigned as Assistant Professor of Oral Surgery at the University of Chicago, and is now demonstrator in Pathology and Oral Surgery at McGill University gave a very interesting lecture on "Clinical Oral Pathology" and discussed different cases seen at the clinic, supplemented by Kodachrome slides.

The president, Miss Margaret Good, presided.

MILDRED STARR

BRITISH COLUMBIA

Victoria Dental Society

Departing from the usual routine, this Society heard a talk from Mr. Bruce McKelvie, Journalist, at its recent meeting. Mr. McKelvie spoke on the early life of the community.

Little news of the inclemency of the weather is ever permitted to escape from Victoria, but the recent widespread publicity given to west coast weather has permitted a slight rift in the iron curtain. Our Victoria correspondent tells us that one of the Society members regularly commutes from his suburban home to the city office by dog sleigh! By the time this reaches print, of course the full glory of springtime in Victoria will have arrived, and all will be forgiven and forgotten, we hope.

•

Vancouver and District Dental Society

At the last meeting of this Society an address was given by Doctor Franz Bushke of the University of Washington in Seattle, on the subject of "Differential Diagnosis of Oral Lesions." The speaker is Professor of Roentgenology at the University, and is also Assistant to Doctor Cantrell, Superintendent of the Swedish Lutheran Hospital of Seattle. A number of specialists from the medical staff of the British Columbia Cancer Institute were present as guests of the Society.

Dr. D. P. Mowry of McGill University, will be present for the next meeting, and will address the Society for both afternoon and dinner meetings, on the subject of "Periodontia for the General Practitioner." A gathering of McGill graduates in dentistry is being arranged to meet Dr. Mowry for dinner, during his visit.

Announcement was made of the mid-winter Clinic of the Seattle Society, and a general invitation issued to all members of our Society.

•

Director of Division of Preventive Dentistry

The Department of Health and Welfare of the Provincial Government, has announced

the definite appointment of an Acting Director of the Division of Preventive Dentistry, in the person of Dr. F. McCombie, T.D., L.D.S.R.-C.S., a graduate from Guy's Hospital Dental School of the University of London. Dr. McCombie was in practice in England, specializing in Preventive Dentistry, until the outbreak of war. He served with the British Army in India and Burma, and returned at the end of the war for further study in Preventive Dentistry. He will probably attend the course at the School of Hygiene at Toronto during the present year, leading to the diploma in Dental Public Health.

At the present time, Dr. McCombie is working with the staff of the Department of Health and Welfare at Victoria, in an endeavour to determine the best methods of providing dental treatment for pre-school children, and for pupils in the lower grades of the schools of British Columbia. The problem of the provision of dental services to the people of outlying and scattered communities will also be studied.

ALBERTA

Dr. MacGregor Visits Alberta

During the first week in February Alberta has the pleasure of hearing several clinics by Dr. S. A. MacGregor of Toronto.

The first clinic was held in the city of Lethbridge when a large number of the dentists in the city and surrounding district attended the meeting.

Two days later another clinic by Dr. MacGregor was held at Red Deer when 17 dentists from all the neighbouring towns in that district attended. Dr. L. J. D. Faskin, President of the Western Canada Dental Society accompanied Dr. MacGregor. He brought a message respecting the next annual meeting of this society which is to be held in Saskatoon this summer.

The next day a special meeting of the Edmonton and District Dental Society was called on short notice to hear a message from Dr. MacGregor. There were 65 members present. Dr. George Decker introduced Dr. Gillet, Director of Communicable Diseases in the Province of Alberta and also Dr. Faskin, president of the Western Canada Dental Society.

It seems that Dr. MacGregor always brings a new message out to this country and even though his main work has been in children's dentistry, the thoughts that he carried to this society extended over a much wider field. Public health dentistry is rapidly coming to the fore and this will have to be sold to the public immediately as it ties in so closely with preventive dentistry. In fact the main message that was brought to us was that education and knowledge and establishment of educational programs in preventive dentistry is something which will have to be commenced immediately by the necessary authorities who can carry out this work. Slides were shown and case histories given.

For this inspiring address Dr. MacGregor was thanked by Dr. W. Orobko and on behalf of the Edmonton Dental Society a gift was shown him that was to be sent to his wife.

W. E. A.

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Edmonton and District Dental Society

This Society's annual "Ladies Night" was held on February 8 with a banquet and dance. Over seventy members and their wives were present. The dental assistants and senior dental students also received invitations to the dance.

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Lethbridge Dental Society

A study group was organized in Lethbridge for the following winter months. Attending members included Doctors Gray, Rylands, Carson, Allen, Gibson, Redding and Fletcher.

Due to Dr. K. A. McMurchy leaving Lethbridge and going to Edmonton, a special meeting was called to elect a new secretary-treasurer for the society. The result of the election was that Dr. H. D. Redding is the new secretary-treasurer.

W. E. A.

SASKATCHEWAN

Regina and District Dental Society

The Regina Society on January 26th, were hosts to Dr. Sandy MacGregor, Pedodonist from Toronto. As guests for this occasion, were Dr. Mott of the Health Planning Service, Dr. A. Chegwin, Provincial Dental Director and four dentists working for Health Region No. 1 at Swift Current.

•

Saskatoon and District Dental Society

The Saskatoon Society had two meetings in January, one strictly a business meeting dealing with the business pertinent to the Conven-

tion next June. The second was in honour of Dr. Sandy MacGregor of Toronto at which time he was the recipient of a water colour prairie scene.

•

Visit of Dr. MacGregor to Regina and Saskatoon

These two districts consider Dr. MacGregor's visit very educational and inspiring. He gave a two day clinic.

The first morning Dr. MacGregor gave a lecture to the dental nurses and dentists on "Diagnosis, Nutrition and the handling of Children in the Dental Office." In the afternoon, actual chair work was performed on the preparation and construction of space maintainers.

The second morning was spent on nutrition and patients were present. Previously, in each case, a week's diet had been charted and a sample of saliva had been sent to the Department of Preventive Dentistry at Toronto. The reports from this Department were considered and Dr. MacGregor commented at length, to the benefit of the patients, parents and dentists.

The afternoon was devoted to operative dentistry at the chair. At the evening session after dinner, Dr. MacGregor presented an illustrated lecture.

The dentists were grateful to the Director of Dental Health who made Dr. MacGregor's visit possible. Dr. MacGregor, with his knowledge and enthusiasm, were real tonics to all present. L. D. H.

EMPIRE NEWS

GREAT BRITAIN

Mass Production in Britain

The demand for free dentures has outstripped the production of teeth and plate materials, and dental mechanics are predicting a scarcity soon. Supplies are already becoming tight.

Small wonder, when a Glasgow mechanic tells me he has impressions for more than 300 sets of teeth on his shelves. Customers now wait up to 10 weeks for their dentures. Before the National Health Service came in he supplied teeth in 14 days.

The mechanic who has an assistant does "about 25 to 30 dentures a week." The surgeon he works for handles from 70-80 patients a day. There are seldom fewer than 15 patients waiting in his rooms.

But both dentists and mechanics agree that things will quiet down in time — but they'll never be so quiet as pre-N.H.S. days.—*Glasgow Evening Citizen,* October 27, 1948.

IRELAND

"The Northern Ireland Minister of Health and Local Government states that 730 doctors have joined the new service, which means that there must be very few general practitioners who are not taking part. Over 90 per cent of the total population of Northern Ireland have registered. Few dentists have remained outside the scheme, 258 being in contract with the board for the provision of general dental services. The calls made by the public upon the dental service have been greater than were expected, and up to the end of October, 55,516 persons have had treatment completed." —"Health Scheme in Northern Ireland," The Lancet 255:835 November 20, 1948 per Public Health Economics.

NEW ZEALAND

Social Security

Ten years ago a Social Security Act was passed in New Zealand which introduced a system of general and specialist medical service for the whole community. Certain features of the scheme aroused great opposition in the medical profession, and last year the Minister of Health at Wellington set up a committee to examine the provisions and advise what alterations were necessary to give effect to the Government's policy of making medical services available free or substantially free of cost.

The committee recommends in the first place that steps be taken to place upon the medical profession itself, as a body, a large degree of responsibility for the ethical behaviour of its members.

Most of the report is about methods of remuneration of general practitioners in a State service. It is agreed that a renewed attempt to introduce the capitation system could not succeed.

A general salaried service is held to offer

no solution. Nothing could be devised which would be both administratively possible and acceptable to the general body of the profession, although it is agreed that in remote areas remuneration by salary may be the only means of securing a service.

There is general agreement that every practitioner shall have the right to charge and recover a fee additional to that payable from the fund when the circumstances require it, but patients have the right to refer any such accounts to the local investigating committee.

As for specialist medical services, the same method of fee-for-service is proposed, and the criteria for the recognition of specialists are similar to those usually adopted in Britain—adequate training in the specialty, possession of higher qualification, holding of hospital or public appointment, and general recognition by colleagues.

"State Medical Service in New Zealand," Supplement to British Medical J. 2286:171 November 13, 1948—per Public Health Economics.

GENERAL NEWS

Compulsory Health Insurance in U.S.A.

Ten senators, five Democrats and five Republicans, are sponsoring a new bill (S. 522) to boost federal grants to assist the states in improving and expanding local public health services. It also proposes financial aid to public and nonprofit institutions offering training in public health.

The widespread sponsorship of S. 522 and others of the fifty odd health measures now before Congress is an indication, at least to some observers, of the lukewarmness many of the nation's legislators are developing toward the administration - sponsored compulsory health insurance measures. While few Democrats have announced outright opposition to CHI, many are sponsoring rival health measures with unexpected enthusiasm. A trend in this direction was last week's announcement by Senator Hill, the only senator who is a member of both the Labour and Public Welfare and the Appropriations Committee, that he sees merit in a ten point program advanced as a substitute to CHI by Dr. Gibson Colby Engel, president of the Pennsylvania Medical Society. The Washington Report of the Medical Sciences listed the ten points of Engel's program as: (1) establishment of a department of health in the President's Cabinet, (2) abolition of partisan politics from appointments to federal public health positions, (3) integration of all government physicians into a U. S. Medical Corps, (4) promotion of health education programs under local auspices, (5) continued federal support of research, (6) financial aid to medical students who promise to practice at least five years in rural areas, (7) subsidization of nurses in training, (8) enrollment of the "medically indigent" in Blue Shield and Blue Cross plans with the government paying all or part of the dues, (9) federal aid in planning and development of diagnostic centres and small hospitals in places remote from medical centres, and (10) improvement and expansion of mental health clinics and preventive services. Opposition to compulsory health insurance was formalized in midmonth in Nebraska where the state legislature memorialized the Congress "to refrain from imposing upon the citizens of this nation any form of compulsory insurance or any system of medical care designed for national bureaucratic control." A similar resolution has also registered its opposition to compulsory health insurance. A telegram sent by the Federation's Washington office to the Senate Labour and Public Welfare Committee stated: "Tremendous progress has already been made in meeting our health problems through voluntary health association . . . We strongly oppose plans under which the federal government would embark on programs providing similar services on a compulsory basis . . ."—A.D.A. News Release.

Compulsory Health Insurance

Excerpt from address by Dr. Clyde E. Minges, President of American Dental Association in N.Y. Jour. of D., Feb., 1949

Proponents of compulsory health insurance claim that the mere passage of a new federal law will lead to a Utopia of health for everyone. Such a law may be able to provide an administrative framework and money, but the hard fact remains that it cannot provide physicians, dentists, hospitals, clinics and other essential personnel and facilities.

This problem has been studied for many years by men qualified in the dental sciences and it cannot be solved by the passage of legislation based on empty promises.

Current experiences with a comprehensive dental program in Great Britain cannot be fully estimated. But it is safe to guess that the program will do little more than disperse already limited dental resources on a program that will bring little or no advance in that nation's total dental health. It is providing emergency dental care for adults with little or no attention toward prevention and control of dental disease in children.

The American Dental Association believes firmly that dental health care must be extended through practical and scientific programs. It has developed a three-point program calling for expanded research, increased dental health education and the development of community programs to make dental care available to all children.

For many years, the dental profession has endeavoured to interest the Congress in a comprehensive program of grants-in-aid to further this objective. It was not until last June that Congress finally established a national institute for dental research. And not even yet have sufficient funds been provided to place the institute in operation.

With existing resources, we recognize that a higher level of dental health for the entire population can best be achieved by concentration on the needs of children. It is the opinion of dental authorities that in public dental health programs, the most efficient use of available dental services would be to devote all needed attention to dental disease in children and to provide as much service as possible for adults.

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Health Service

by J. A. Salzmann

Excerpt from Editorial in N.Y. Jour. of D. Feb., 1949

Mr. Ewing is planning to ask Congress for a 4 per cent payroll tax on the first $4,800 of income, divided equally between employer and employee, to finance his proposed program. Under this plan, a person earning $50 a week would pay $1 weekly for health insurance for himself and his family. His proposal would be patterned along the lines of the Social Security Act and compensation to health practitioners would be determined on a basic set of fees for each community.

Whether or not one believes in compulsory health insurance, the fact is that the family whose income is $50 a week cannot afford to pay for medical care. The question is, shall these families do without needed health service; shall—and can—physicians and dentists render the service at their own expense as is generally the case at present; shall the government provide such service or shall they receive the service as a benefit to which they are entitled under some form of health insurance and for which the professional men receive a fee. The program of the A.D.A. we feel should include increased educational facilities, subsidized practice for certain rural and substandard communities, and a universal service program for children to eliminate annual increments of dental caries.

•

Rheumatic Diseases of the Joints

by Dr. Divenyi Albin

Hungarian Medical Journal, January 2, 1949.

The role of the aetiologic factors of the rheumatic articular processes and the pathomechanism of their genesis is not yet clarified. Two trends prevail: 1. The various forms are due to different aetiologic factors. 2. All patterns are, independently of the pathogenic agent and localization, to be explained by allergic phenomena.

•

American Legion Opposes Socialized Medicine

At their annual convention held at Miami, Florida last October, the American Legion passed a resolution opposing socialized medicine. Pointing out that any plan of compulsory health insurance would have the tendency to lower the standard medical care that is now guaranteed the veterans and would also deprive the citizen of the right to select the quality of medical care that he can afford, and that this would be contrary to the fundamental rights of the individual, and that they were unalterably opposed to all efforts and movements to enforce socialized medicine upon the American people.

•

Art Exhibit

An Art Exhibit sponsored by the First District Dental Society of New York will be held March 31 to April 4, 1949. All members of the Society are eligible to exhibit: oil paint-

ings, water-colours, sculpture, etchings, line-drawings, photography, leathercraft, literature (not dental), music (printed), pottery, woodcraft, jewellery.

•

Stomatitis Due to Streptomycin

Report on Three Cases

In the Journal of the American Medical Association, Journal for (Oct. 16, 1948), Beham and Perr of New York report the case histories of three tubercular patients who developed extensive painful stomatitis resembling the aphthous variety following treatment with streptomycin. In each of the case histories the stomatitis disappeared shortly after withdrawal of the streptomycin. One patient developed a swelling of the mucous membrane of the mouth within three hours after the first injection.

The clinical picture presented in the three cases was identical; painful, erosive and membranous stomatitis, involving entire oral mucous membrane as well as the under surface of the tongue. The fact that the lesions reappeared promptly on resumption with streptomycin indicated that the stomatitis was caused by the antibiotic.—*N.Y. Jour. of D.*

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BULGARIA

"Bulgaria has launched one of the most ambitious social insurance and pension projects anywhere in Europe. It is a type of cradle-to-the-grave coverage and all premiums are paid by the employer which, in many cases, means the state. The new insurance will cover "workers, farmers, civil servants, artisans, merchants, people in the free professions and those who have worthily served the state." Only those of the approximately 7,000,000 population who are in business for themselves are compelled to pay the premium.

•

Obesity — A Disease

Obesity—the state of being overweight—is a disease and a dangerous one, it is stated in Health magazine published by the Health League of Canada.

In an article—"Obesity and Health"—Dr. N. Obney of Toronto says that obesity is one of the great problems of middle age — it is a definite deterrent to health. It may be classified into two main types; namely the acquired or simple type and the endocrine type which is due to glandular disfunction. The acquired type is due to excessive intake of food or alcohol in relation to the amount of exercise.

Dr. Obney says that because of increased weight, muscular activity places a greater load upon the heart and the blood vessels. The result is that the heart works harder, and the blood pressure goes up to keep up the supply with the demand.

Diabetes is more common in the obese than in persons of normal weight. The incidence of gallstones is relatively high in the obese persons, while individuals who are overweight are said to be less resistant to infections and are poorer surgical risks than those of normal weight.

Dr. Obney says the two types of obesity must be differentiated by careful history, physical examination and laboratory tests before proper treatment can be administered to the patient. He reveals that women are more pre disposed to obesity than men in the ratio of 10 to 1.

In discussing simple obesity, Dr. Obney states that this type is usually the result of the consumption of a high caloric diet in excess of energy requirements. He warns, however, that overweight persons should not stick to any diet too rigidly "because the body must have certain essential foods in order to remain healthy."

"The regimens of many diet kitchens and often physicians' diet lists are frequently dominated by traditions and empirical notions," Dr. Obney says. "Many special diets are quite complex, unscientific, and often, if continued over a long time, are positively dangerous because of nutritional imbalance that induces deficiency conditions.

"In diet planning, one should adhere as far as possible, to the normal well-balanced diet except in certain diseases of metabolism in which the balance of specific dietary essentials must be radically altered from the normal. Except in special temporary treatment, it is important to include in the diet protective foods that will provide all the vitamins, minerals and sufficient good quality protein.

"In certain restricted diets and in the treatment of conditions of malnutrition, the feeding of pure vitamins or minerals may be indicated to insure an abundant supply and to obtain quick improvement, but in general it is preferable to obtain a high intake of dietary

essentials through the use of natural foods which are more likely to furnish other needed nutrients as well and be more pleasant to take."

Dr. Obney emphasizes that each obese person must be treated individually and his diet must be adjusted accordingly.

•

U.S.A. Army Seeks Authority to Commission Women Dental Officers—Terminates Dental Service for Dependents of Army Personnel

The U.S.A. Army Surgeon General's Office will ask the new Congress for authority to commission women officers in the dental, medical, veterinary and medical service corps, according to reports from Washington, D.C. At present the Army is not authorized to have women officers except in the WAC and the Nurses Corps. If Congress acts favorably, the Army would be in a position to catch up with the Navy which already is commissioning women regulars in all branches of its medical department. The Navy has set a quota of two women dental officers this year and tentatively has scheduled additional quotas for women dentists for 1949 and 1950. Despite recent recruiting campaigns which have extended to community levels in nearly all sections of the country, the shortage of dentists and physicians in the armed forces is growing worse. The situation has become so serious in the Army, as recruits begin to pour in, that new orders have been issued requiring that recruits and inductees must have at least 16 natural teeth, which shall include 4 upper anterior, 4 upper posterior, 4 lower anterior and 4 lower posterior teeth with satisfactory opposition. Previously, even edentulous recruits and inductees were accepted for Army service.— A. D. A. News Release.

IN MEMORIAM

E. Allan of North Battleford, Sask., died suddenly, March 30. He served on the collegiate board for four years and was its chairman for two years.

Dr. Allan is survived by his widow, a son and a daughter.

•

William John Hill of Toronto, aged 78, died on January 20 after suffering a coronary thrombosis a month previous.

Dr. Hill was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1898. He began practice in Alliston moving to Toronto in 1922. He was an honorary member of the Royal College of Dental Surgeons having completed 50 years of active practice.

He was a member of Simcoe Lodge A.F. & A.M., and the Scottish Rite. He was a Shriner, a 32nd degree Mason, and a past deputy Grand Master of the Grand Lodge of Ontario.

He was a member of Deer Park United Church.

Dr. Hill is survived by his widow and two daughters.

•

Earl Donald McArthur of Winnipeg, Manitoba, aged 59, died suddenly February 5. He graduated from Northwestern University in Chicago and practised his profession in Winnipeg until he retired due to ill health in 1945.

Dr. McArthur is survived by a sister and a brother.

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Charles Berkley Taylor of St. Thomas, Ontario, died on December 16 after a brief illness. He was 71 years of age.

Dr. Taylor graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1903. He immediately took up practice in St. Thomas where he continued until his death.

Dr. Taylor was well known in South Western Ontario and a highly esteemed member of his profession. He was an active member of first United Church and has served in many capacities over a long period of years. He was a member of his church official board and Superintendent of the Sunday School for about 20 years. He was keenly interested in Y.M.C.A. and a past president of that organization in St. Thomas.

He was a senior member of St. Thomas and Elgin County Dental Society. He was associated with St. Thomas Golf and Country Club since its early years and in 1948 was president of the Club. He also was a member of Rathbone Lodge No. 12 Knights of Pythias.

He is survived by his widow, one daughter and three sons.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 MARS, 1949 NO 3

Névralgie du Trijumeau*

par FRANCEL PAPAILLER, B.A., D.D.S., L.C.D., Gonaïves, Haiti

Exposition et Classifications

La névralgie a été, même dans les temps les plus reculés, l'objet de nombreuses études. Le sens étymologique du mot: NEURON—nerf; ALGOS—douleur, laisse voir que ce mal était déjà connu chez les Grecs. Les travaux anciens en ont largement fait mention. Mais cependant, depuis le début du XX[E] siècle, la question semble être d'une très grande importance. Les travaux de Trousseau, de Frazier et de Fothergill ont ouvert la voie aux recherches nouvelles dont le but est de préciser la nature du mal, d'en opérer la classification et d'en perfectionner son traitement. Certains auteurs cependant, mettant toute idée de classification de côté, ont fait usage du terme générique, "Névralgie faciale", pour désigner toutes les algies siégeant à la face, à la tête ou dans la cavité buccale; d'autres, au contraire, ont crû bon d'adopter une certaine classification afin, semble-t-il, de mieux traiter et de mieux résoudre le problème que constitue pour eux la névralgie du trijumeau. Dans notre étude nous exposerons pour nos lecteurs les principales classifications qui ont été faites, espérant ainsi les aider dans la mesure du possible, à bien fixer la question.

Classifications:

1—Hermann Printz et Sigmud Greenbaum, deux compétences en la matière, parlant de la Névralgie faciale essentielle dans leur intéressant traité, "The Diseases of the Mouth and their Treatment", édition sq 35, ont adopté la classification suivante:

A—Trifacial Neuralgia
B—Atypical Neuralgia

Plus tard, Marck Albert Glasser M.D., Los Angeles, Calif., dans un bel article publié dans "The Journal of American Dental Association", vol. 26, 1939, écrivit "que les névralgies de la face et de la tête peuvent être classées en quatre groupes importants".

A—Trigeminal Neuralgia (primary and secondary)
B—Otalgia
C—Other cranial Neuralgia
D—Atypical neuralgia (primary and secondary.)

Dans cette classification nous nous arrêterons seulement à ce qui nous intéresse en tant que dentistes.

Michel Déchaume, chargé du cours de Stomatologie à la faculté de médecine de Paris, dans son "Précis de Stomatologie," édition sq 44, page 567, a reparti les algies de la face en trois grandes variétés:

A—Névralgie du trijumeau ou Névralgie faciale essentielle.
B—Sympathalgies.
C—Psychalgies.

Tout récemment dans un article paru dans une revue française "La Semaine

*Thèse préparée au cours d'un stage d'une année dans le service de chirurgie de la faculté de Chirurgie Dentaire de l'Université de Montréal.

des Hôpitaux de Paris", octobre 1947, J. Guillaume, Y. Sigwald et Ch. Ribadeau-Dumas ont à leur tour adopté la classification suivante qui reste jusqu'ici, semble-t-il, la dernière.

A—Névralgies faciales, dites essentielles ou Tic douloureux
B—Névralgies symptomatiques
C—Algies faciales atypiques.

Cette classification se rapproche de celle de M. Déchaume, mais au lieu de parler des Pyschalgies, ces auteurs, cités plus haut, ont fait mention des "Algies atypiques". Ils se sont donc ainsi ralliés à la classification de Printz et Greenbaum et en partie à celle de M. Glasser. Leur classification est donc une espèce de compromis entre celles de Printz et Greenbaum, de M. Déchaume et de M. Glasser.

Dans notre étude nous ferons de même, c'est à dire, nous prendrons dans chacune des classifications qui viennent d'être exposées ce qui nous intéresse. Toute notre attention se portera sur ce qui a un rapport plus ou moins direct avec notre sujet: "La Névralgie du Trijumeau". Nous essayerons de démontrer que toute manifestation douloureuse qui ne correspondra pas à la description que nous ferons en temps et lieu de la névralgie du trijumeau, est d'étiologie et de natures diverses. De ce fait, nous diagnostiquerons la névralgie essentielle et l'isolerons de celle dite sympathique ou sympathalgique, de celle dite enfin névralgie faciale atypique.

Apercu Anatomique du Trijumeau:

Avant d'aller droit au but que nous nous sommes proposés, nous essayerons, très brièvement, de donner un simple aperçu anatomique du trijumeau qui est responsable de la névralgie faciale. Nous espérons que cette manière de faire laissera à nos lecteurs la chance de mieux nous suivre et de mieux embrasser toute la question.

Disons, sans trop nous éterniser toutefois là-dessus, que le trijumeau naît du méso-céphale, sur les côtés de la face antérieure de la protubérance par deux racines accolées; l'une petite et motrice, l'autre grosse et sensitive. Elles se dirigent vers le sommet du rocher où elles rencontrent le ganglion de Gasser que pénètre seule la racine sensitive.

Le ganglion de Gasser donne naissance à trois troncs terminaux: ophtalmique, maxillaire supérieur, maxillaire inférieur. La racine motrice reste indépendante du ganglion, se fusionne en avant de lui avec le nerf maxillaire inférieur qui devient un nerf mixte, tandis que l'ophtalmique et le maxillaire supérieur restent exclusivement sensitifs. Ces trois troncs terminaux donnent naissance à diverses branches dont les principales sont:

a) *Ophtalmique:* nasal interne et externe, frontal, lacrymal, nerfs ciliaires (ganglion ophtalmique.)

b) *Maxillaire supérieur:* orbitaire, dentaire antérieur, médian et postérieur, pharyngien de Bock et sphéno-palatin (ganglion de Meckel) sous-orbitaire.

c) *Maxillaire inférieur:* temporal profond moyen, temporo-buccal, temporo-massérérien, pterygoidien interne, dentaire inférieur, lingal, ganglion otique d'Arnold . . .

Ainsi le trijumeau assure:

a) la sensibilité cutanée et muqueuse de la face et de ses cavités annexes, ainsi qu'une grande partie de la langue.

b) La fonction masticatrice.

Nevralgie Dite Essentielle (Primaire)

Caractéristiques-Définition:

Plusieurs variétés d'algies peuvent apparaître dans le territoire facial. Nous allons nous efforcer d'isoler de ces groupes la névralgie dite essentielle à laquelle reste lié le nom de Trousseau, qui en avait donné une description, que les travaux ultérieurs ont toujours reproduite. La névralgie dite essentielle ou tic douloureux de la face, est la forme la plus typique des douleurs faciales. Elle est la plus fréquente, la plus connue. Cette névralgie ne se rencontre pas souvent chez les jeunes sujets; elle semble avoir une prédilection pour les personnes qui ont déjà franchi la quarantaine. Dans une étude sur la névralgie du trijumeau, Thurel essayant de définir cet état, s'est exprimé de la façon suivante:

"La névralgie du trijumeau constitue une entité morbide bien déterminée quant à ses caractères, son évolution et son traîtement; si nous ignorons les causes de cette névralgie dite essentielle, nous pouvons affirmer, en absence de tout signe objectif, que le trijumeau n'est le siège d'aucune lésion organique: c'est un trouble fonctionnel qui disparaît après destruction du nerf et ne récidive qu'après régénération nerveuse."

Printz et Greenbaum voulant définir la névralgie du trijumeau ont écrit à la page 520 de leur ouvrage "The Diseases of the Mouth and their Treatment":

"Trifacial neuralgia manifests itself by a sudden paroxysmal pain of a sharp, darting, stabbing character along the peripheral ramifications of the main divisions of the trifacial nerve."

La névralgie faciale n'a pas de cause connue. Elle est, pour emprunter la phrase de Thurel, "un trouble fonctionnel." Printz et Greenbaum ont aussi affirmé que la névralgie n'a pas de cause connue:

"The disease has no known cause" (page 520, 30E ligne, "The Diseases of the Mouth and their Treatment.")

James E. Garretson soutient dans son livre "A System of Oral Surgery" que tout en n'ayant pas de cause connue, la névralgie faciale demeure un effet, une condition. Elle est la résultante d'une cause que fort malheureusement nous ignorons à date. Toujours dans son "A System of Oral Surgery", il dit que la névralgie du trijumeau n'est pas une maladie; on ne peut parler d'elle comme on parle de la goutte, du rhumatisme: "There is not a disease which, or might be, termed neuralgia, as, for example, gout is a disease with an individuality, or rheumatism is a disease."

Cette ignorance de la cause de la névralgie constitue, à part les symptômes qui lui sont propres, une des caractéristiques les plus frappantes de cette algie faciale.

Predispositions: Conditions Predisposantes

Si toutefois, la névralgie n'est pas, par elle-même, une cause, si elle n'est que l'effet d'une cause que nous ignorons malheureusement, il ne reste pas moins, vrai qu'il existe une classe de personnes pouvant être appelées "Nevralgiques". Ces personnes ne se recrutent pas strictement, comme on serait porté à le croire, chez les tempéraments nerveux, mais elles se rencontrent surtout chez les anémiés, les épuisés et les déprimés. Il existe donc des gens prédisposés à la névralgie; il existe également des conditions prédisposantes à la névralgie. Ces conditions prédisposantes doivent avoir toute notre attention car nous pourrons, en mettant le malade en garde contre elles, éviter dans une large mesure la présence de ces irradiations douloureuses observées dans les cas de névralgie.

Nous appuyant sur l'expérience, nous pouvons affirmer, sans trop craindre de nous tromper, qu'une atmosphère humide, froide est une des conditions prédisposantes les plus puissantes—. La preuve est que les patients ressentent leurs crises le plus souvent quand l'ambiance est froide et humide. La fatigue, le surménage, la pauvreté de la diète, l'usage exagéré de l'alcool et des drogues narcotiques, les pertes de sommeil, la constipation, la diarrhée, les maladies infectieuses aiguës, les dents malades, l'hérédité, le rhumatisme, les traumatismes, les troubles digestifs et respiratoires, le genre de travail, l'artériosclérose, en résumé, tout ce qui empêche le libre et propre accomplissement des fonctions vitales constitue un facteur prédisposant à la névralgie faciale.

Dans les voisinages marécageux, la névralgie se manifeste sous forme de névralgie périodique. On croit que cette forme est largement influencée par la malaria. C'est la raison pour laquelle les médecins préconisent l'usage de quinine, qui arrive presque toujours à avoir raison de cette névralgie. La syphilis est encore une des causes prédisposantes. On arrive très souvent à l'élimination complète et totale de la névralgie en soumettant le patient à un traitement anti-syphilitique. Toutes les fois que l'harmonie et l'équilibre sont affectés dans l'organisme, nous pouvons constater, sans trop nous étonner, la présence de névralgie faciale car, pour reprendre la phrase de Thurel,

elle résulte d'un trouble fonctionnel quelconque.

SYMPTOMES

Avec les symptômes, nous abordons la partie peut-être la plus importante de notre étude. Ce sont en effet ces symptômes qui nous permettront d'arriver au but que nous nous sommes proposés. C'est à dire, diagnostiquer la névralgie faciale et l'isoler des autres formes d'algies que nous pouvons rencontrer dans les territoires buccaux et faciaux.

La névralgie, dite essentielle, qui est la véritable névralgie du trijumeau survient en accès paroxystiques. Chacun de ces accès est composé d'une suite d'élancements fulgurants que le malade compare à une décharge électrique, à des coups de flèche, ou à une multitude de piqures.

La douleur s'observe plus souvent le long du parcours les branches supra et infra orbitaires d'un côté de la face. Elle est parfois accompagnée de rougeur de la joue, de légers oedèmes, d'écoulement lacrymal, nasal, d'une coloration grise dans la région des sourcils. Chaque élancement porte la douleur au maximum, elle ne dure pas longtemps, mais elle apparaît à nouveau avec plus ou moins de fréquence.

La douleur d'ordinaire ne reste qu'une demi-minute environ et dans des cas plutôt rares, elle peut varier entre une ou deux minutes. Au début elle est superficielle et bien limitée; elle parcourt une ou plusieurs branches du trijumeau. Cela est tellement vrai qu'un malade intelligent peut décrire, indiquer le trajet de la douleur sur les fibres nerveuses intéressées. Au début de l'évolution de la névralgie, la douleur naît dans une zône limitée du territoire cutané ou muqueux du trijumeau et pendant un certain temps, elle reste limitée à ce territoire. Plus tard, elle s'étend à une zone plus vaste et moins précise. Dans ce cas le malade n'arrive pas comme, il aurait pu le faire au début, à indiquer le point de départ et le trajet de la douleur. Cependant la projection douloureuse ne déborde jamais le territoire du trijumeau. Chaque branche, chaque filet nerveux collatéral peut être le siège de la douleur, mais, d'une manière générale, l'accès se manifeste dans une zone cutanée et c'est particulièrement sur le nerf sus-orbitraire, le nerf mentonier que s'extériorise la première manifestation douloureuse.

Un des caractères importants de cette névralgie est qu'en une région limitée, il existe une zone "Zone d'excitation" de la douleur. Toute incitation d'une certaine qualité, portée à ce niveau, déclenche automatiquement une crise douloureuse quand le sujet est en période d'accès. Cette zone est importante, car c'est sur elle que doit porter toute tentative thérapeutique (alcoolisation). Elle est fixée et limitée, elle reste la même, même lorsque la projection douloureuse est étendue.

Il n'est pas toujours aisé de mettre en évidence cette "Zone d'excitation", même lorsqu'elle peut-être constatée; la signification en est grande, car des déductions thérapeutiques en découlent (Semaine Hop. Paris, oct. 1947). En effet, il suffit de supprimer la sensibilité dans cette zone pour arriver à supprimer d'une façon totale les accès. En pratique, on obtient une anesthésie limitée à cette zone d'excitation, par les injections neurolytiques periphériques, ce qui se réalise facilement mais qui n'a souvent qu'un effet momentané ou encore par la neurotomie rétro-gassérienne qui la provoque de manière durable. En dehors des accès, nous dit J. Sigwald, l'examen reste négatif; la sensibilité est normale, le reflexe cornéen est intact. Les fonctions sensitive et motrice du trijumeau sont indemnes. La seule constatation qu'on puisse faire assez souvent est la mise en évidence de la zone d'excitation. L'évalution est capricieuse; les accès peuvent se grouper suivant un rythme rapproché et réaliser un véritable état de mal qui rend difficile, pour ne pas dire impossible, l'alimentation et la parole, suspendant en quelque sorte la vie du malade dans la crainte que le moindre mouvement ne provoque une reprise de l'accès. Une accalmie succède aux paroxysmes douloureux, mais la durée en est variable, pouvant être très brève lors des fortes crises. Pendant cette accalmie la détente est complète et les incitations portées sur la zone d'ex-

citation ne sont génératrices d'aucun accès.

Des manifestations vaso-motrices accompagnent surtout la crise douloureuse; elles apparaissent à son decours sur l'hémisface correspondante, consistant en larmoiement et en vaso-dilatation des téguments.

Comme aide mémoire, nous allons résumer dans un tableau les caractéristiques de la névralgie du trijumeau.

Tableau Clinique

Le tableau clinique est toujours le même ou presque toujours. Quel que soit le malade, on observe, avec de légers écarts, les mêmes symptômes que nous venons d'exposer plus haut. Le mal, ainsi que l'a fait remarquer Sicard, se présente toujours sous la forme d'un drame en trois actes: le premier joué par le trijumeau (douleur) le deuxième par le facial (spasme) le troisième par le sympathique (trouble vaso-moteur).

Notre tableau clinique comprendra quatre points importants

A) Douleur intermittente.
B) Douleur limitée dans les débuts à 1 ou 2 branches du trijumeau.
C) Douleur s'étendant graduellement aux branches voisines, (spasme facial, troubles sympathiques).
D) Conditions d'apparition des accès névralgiques (Zone d'excitation).

I. Douleur Intermittente

1) Elancements de courte durée parcourant le nerf comme un éclair.

2) Elancements arrivant en série par accès réguliers ou non.

3) Elancements suivis d'une période d'inhibition nerveuse, d'autant plus complète que la douleur a été intense.

II. Douleur Limitée Dans Les Débuts

1) Commence lentement, part d'un point périphérique fixé, toujours le même chez un même malade.

2) Elle embrasse en remontant toute la branche nerveuse, chaque branche peut être le siège de la douleur.

III. Douleur S'Etendant Graduellement

1) Après un début imperceptible, devient insupportable, très aiguë.

2) S'accompagnant de manifestations vaso-motrices, sympathiques, homolatérales (spasme facial, troubles sympathiques (rougeur de la face) troubles sécrétoires; lacrymales, salivaires, pituitaires.

IV. Apparition D'Accès Névralgiques: Conditions

1) Causes provoquantes: la parole, les mouvements de la face, attouchements, etc.

2) Zone d'excitation: lèvres supérieure et inférieure, menton, extrémité de la langue, gencives . . .

Diagnostic

On doit éviter de confondre le névralgie du trijumeau avec la migraine, la sinusite, l'odontalgie, l'arthrite temporo-maxillaire, l'herpes Zostérienne, les tumeurs du cerveau, l'hystérie, le rhumatisme, la goutte etc. . . .

Alajouanine et Thurel insistent sur l'importance du stimulus qui, d'après eux, est le meilleur élément de diagnostic et sur l'importance de la "Zone d'excitation", sur laquelle l'action thérapeutique doit être concentrée. Quand on fait l'alcoolisation, c'est sur la zone d'excitation que l'on doit agir parce qu'il a été demontré que l'anesthésie du territoire douloureux ne conduit à aucun résultat satisfaisant.

Pathogenie: Etiologie

Au début de ce siècle, beaucoup d'auteurs semblaient se donner le mot en affirmant l'origine périphérique de la névralgie faciale. D'après eux, la douleur avait toujours pour point de départ la périphérie du nerf. D'autres auteurs, dans la suite, se sont élevés contre la conception de l'origine périphérique de la névralgie. Alajouanine et Thurel, par exemple, ont déclaré qu'elle ne cadrait pas avec la dissociation des zones d'excitation et de retentissement douloureux, avec le parcours des irradiations ne correspondant pas au trajet des troncs nerveux et avec la variabilité d'action des causes provocatrices d'un moment à l'autre.

La dissociation de la zone d'excitation et du retentissement douloureux et le rôle primordial de la zone d'excitation, rôle prouvé par les résultats thérapeu-

tiques, incitent ces auteurs, dit Michel Dechaume, à considérer la névralgie faciale comme une réaction de tout ou en partie du trijumeau, déclanchée, à la manière d'un réflexe, par un stimulus portant sur un point quelconque du territoire sensitif du trijumeau qui est le siège d'une hyperexcitabilité douloureuse.

Dans son "Précis de Stomatologie", M. Déchaume semble confirmer les points de vue d'Alajouanine et de Thurel. Il s'élève aussi contre la conception de l'origine périphérique de la névralgie. Ecoutons ici son raisonnement:

"Le siège nucléaire de l'hyperexcitabilité douloureuse est confirmé par la topographie des douleurs. Le trajet des élancements douloureux est indépendant de celui des troncs nerveux; lorsque les irradiations douloureuses traversent plusieurs territoires voisins et même lorsqu'elles sont doubles ou divergentes, elles occupent toujours le même plan dans toute l'étendue et le plus souvent le plan superficiel.

Les manifestations homolatérales associées, motrices, sympathiques se produisant à titre d'épiphénomènes, surtout dans les accès très douloureux, s'expliquent par la diffusion de l'hyperexcitabilité aux centres moteurs et sympatiques voisins. En résumé, continue-t-il, toujours d'après Alajouanine et Thurel, il est donc logique d'admettre, en se basant sur tous ces fait, que la névralgie faciale, dite essentielle, créant une hyperexcitabilité du noyeau sensitif du trijumeau, relève d'une lésion uniquement irritative de celui-ci, mais la nature de cette lésion reste indéterminée. Sans doute s'agit-il d'une simple épine irritative, non évolutive par elle-même, et faut-il faire jouer au terrain un rôle important? La névralgie faciale est une maladie de l'âge mûr, ne s'observant guère avant la quarantaine; elle fait partie du bagage pathologique de la famille neuro-arthritique et s'intrique volontiers, d'ailleurs, avec d'autres manifestations morbides, en particulier avec l'asthme et la migraine, mais nous ignorons son étiologie."

D'après Baudoin, "pour prendre une comparaison électrique, tout se passe comme si un appareil nerveux sensitif se chargeait à un potentiel croissant quand la tension est suffisamment élevée, la décharge douloureuse éclate. On observe alors une période de calme, puis l'appareil se recharge ainsi de suite . . . L'accès neuralgique est la décharge sous l'influence d'excitations periphériques d'un noyau sensibilisé par le déséquilibre neuro-végetatif".

Presentation de Cas

CAS I: Au début du mois d'octobre 1946, un homme d'un certain âge se présenta au cabinet d'un de mes amis dans le but de recevoir des soins dentaires. Il déclara avoir été depuis six mois la proie de douleurs insupportables du coté gauche du maxillaire supérieur. "Au début, expliqua-t-il, je n'avais qu'une espèce de gêne en mangeant quelque chose de dur. Mais depuis un mois, j'avais comme des élancements, une douleur subite, profonde, aiguë se faisant sentir par moments plus ou moins courts. Je ne pouvais ni parler, ni boire pendant ces périodes. Seule l'obscurité complète soulageait un peu mon mal. Je ne pouvais m'étendre, car ma souffrance devenait atroce et intolérable quand je voulais garder le lit, j'étais donc forcé de passer des nuits dans un fauteuil. Les sédatifs n'avaient aucun effet".

L'examen de la bouche n'avait rien révélé d'anormal; pas de carie, articulation normale. La radiographie n'a pas été plus heureuse: tissus en parfait état.

En questionnant le malade, il nous apprit qu'il avait fait une crise de malaria trois ans plus tôt, mais qu'il avait été soigné et complètement guéri. Il déclara ensuite avoir eu une fois le rhumatisme; il avait été soigné et guéri. Pour finir le patient dit n'avoir jamais eu d'autres maladies.

En faisant un examen physique du malade, nous avons vu qu'il portait aux coudes et dans les creux des doigts de petites plaies (boutons). C'est alors que mon ami et moi nous avons décidé de conseiller un examen de laboratoire au malade. L'examen bactériologique a été consenti. Deux jours après notre malade revint nous voir avec les résultats. La fiche de laboratoire nous mit en présence

d'un homme atteint de syphilis (positif +++).

Ne voulant pas blesser sa susceptibilité, nous lui fîmes comprendre que seul un traitement général "pour le sang" (sic) pourrait avoir raison de son mal. Il vit son médecin, qui lui fit des injections de Pénicilline (5 flacons de 100,000 Unités) suivies d'une cure d'Arsenic-Bismuth. Quelques temps plus tard le malade revint nous voir: il était débarassé de son mal.

CAS II: A la fin de juillet 1947, Mme L. A., ma voisine, me fit appeler par son fils. Quand je me présentai, j'ai vu une personne couchée dans une attitude très particulière:—la main à l'humiface gauche plus ou moins crispée. Immobile, comme sidérée, la femme attendait quelques temps avant de m'adresser la parole (elle attendait la fin de la crise). Elle me dit enfin que depuis près d'une quinzaine elle avait "quelque chose" qui la piquait comme des "guêpes" (sic) du coté gauche de la face, mais depuis trois ou quatre jours cette douleur avait changé de forme. Elle devenait aiguë, lancinante, apparaissant par moment. Elle s'étendait du coté de la 3è molaire supérieure gauche vers la latérale supérieure gauche. Les douleurs arrivaient en série, par accès reguliers.

Le facies de la malade était grimaçant. La rougeur de la face était frappante. Il y avait présence de hypersécrétion lacrymale. Les yeux étaient cernés, presque sans expression. La douleur était déclanchée chaque fois que la pointe de la langue touchait la face linguale des bicuspides supérieures gauches. L'examen de la bouche n'offrait rien de particulier: quelques dépots calcaires du coté buccal des molaires. Leur ablation a été faite, mais la douleur n'avait pas disparu. Au contraire, elle devenait plus intense. La radiographie n'a rien révélé: M.P.D. en bon état. Pas de troubles du coté des apex et tissus périapicaux . . .

La malade avait une perte de sommeil, suivie d'une perte de poids. Elle avait fait une crise d'anémie 2 ans auparavant. Je lui ai conseillé la vitamine B. par voie buccale et par injections. Après un mois elle n'avait aucune douleur.

CAS III: Vers la fin de février 1948, un homme un peu âgé se presenta au service de Chirurgie buccale de la faculté Dentaire de l'U. de M. Il fut accompagné de son dentiste privé, qui sollicita une consultation. Le docteur Gérard de Montigny et moi examinâmes le malade. Pas de dents. Douleurs insupportables du coté droit de la mandibule; douleurs s'étendant parfois sur le bord de la langue et sur une bonne partie du plancher lingual. Douleurs intermittentes, aiguës, arrivant en saccades: L'obscurité augmente la douleur. Quatre ans depuis la première crise.

Traitements Anterieurs:

1—Injection d'alcool, calme complet pendant une année entière, puis la douleur reparait à nouveau avec la même intensité que la 1ère fois.

2—*Injection d'alcool:* Calme complet pendant huit mois. Absence totale de douleur, puis la douleur reparait à nouveau avec plus de fréquence et d'intensité que jamais.

3—*Injection:* Aucun effet. Nous avions fait des radiographies; rien d'anormal. Le patient voulait un traitement radical. Il fut renvoyé. Nous lui avions donné l'adresse d'un neurologue. Ce dernier soumit le malade à une cure de vitamine B, aucun résultat, le traitement radical sera effectué.

N.B. L'organisme s'habitue à l'alcool et les résultats sont nuls à la longue. Nous pensons qu'en variant la concentration de l'alcool nous prolongerions les résultats. Nous proposons donc de varier la concentration d'alcool à chaque injection; le nombre de *cc* peut rester toujours le même.

Traitement de la Nevralgie du Trijumeau

Le traitement de la névralgie essentielle du trijumeau, il y a de cela quelques années, était très simple. Il comportait deux issues; l'alcoolisation périphérique pour les formes récentes et localiséés, pour les formes plus tenaces ou anciennes la radicotomie rétro-gassérienne. Parfois certains traitements médicaux étaient employés mais leurs resultats

peu satisfaisants contribuaient à les plonger dans l'oubli.

Le trichlorethylène, découvert par chance en allemagne, a connu une certaine vogue, mais son action après tout n'est que passagère. La formule de Moral a eu sa période de succès:

℞
Sulphate de papavérine gr iV (0,025)
Lumydrine gr 1/10 (0,006)
Sacch. Alb. gr 1xxv (5.0)
M.F. pulo No xii
Un cachet trois fois par jour.

La formule suivante est encore très employée.

℞
Menthol gr XXX (2.0 gm)
Chloroforme (fl ℥ ij 8.0cc)
Teinture l'aconite q.s.ad
fl ℥ j (30.0cc) - M
Sig.: Pour usage externe seulement.

Anciennement, ces formules étaient plus fréquemment usitées. Ce fait s'explique aisément; on avait une certaine peur de recourir aux moyens chirurgicaux. On assistait alors à la naissance d'une pléiade de formules. Elles n'étaient pas sans valeur, car elles arrivaient non pas à guérir le mal, mais apportaient de grands soulagements aux patients.

En fouillant par hasard dans un ancien bouquin de thérapeutique, nous avons été heureux de tomber sur une "mine" de formules. Nous exposerons ici quelques unes d'entr'elles pour essayer de trouver une formule efficace et definitive.

Liniment de Rauque:

℞
Extracti belladonnae ℥ij
Etheris ℥ j
Aquae lauro-cerasi ℥ijM
Sig Appliquer sur la partie dans un morceau de flannelle saturée.

Formule du Dr Wood:

Chloroformi f℥ij
Camphorae ℥ j
Mélanger avec le jaune d'un oeuf et ℥ vj d'eau, une cuillèrée, chaque quart d'heure.

Formule du Dr Crave:

℞
Pulveris opii ℥ij
Camphoroe ℥ss
Picis Burgundicae q.s. M
Emplâtre. Mouiller la partie avec de l'eau chaude avant application.

Pomade de Cazenave:

℞
Chloroformi
Potassi cyanidi
Adipis ℥ iij
Cera alba q.s.

Formule du Dr Naphrys:

℞
Atropiae sulphatis gr. V I IJ;
Morphinae sulphatis gr. XVJ;
Aconiae gr. IJ;
Acidi sulphurici diluti MV;
Alcoholis f℥ ss;
Oleialiva q.s. ad. F℥ IV M
Sig—Liniment Seratif puissant.

Revenons à l'actualité et voyons quel traitement est appliqué dans le cas de névralgie du trijumeau.

Lorsque la névralgie est récente, que son siège est limité qu'il s'agit d'une forme primitive qui répond à la description de l'algie dite essentielle, il faut, disent J. Guillaume, J. Sigwald, et Ch Ribadeau-Dumas, dans leur récente étude parue dans la Sem. Hop. Paris, 21 oct. 1947, tout d'abord tenter la neurolyse des branches périphériques; elle est sans risque quand elle est faite à l'échancrure sus-orbitaire, au trou sous orbitaire ou au trou mentonnier; l'injection d'alcool à ces niveaux est facile à pratiquer.

L'alcoolisation des grosses branches est plus délicate; soit au trou ovale, soit au voisinage du trou grand rond, elle comporte quelques risques. Il convient, disent les auteurs déjà cités, de n'y recourir que chez les sujets dont la douleur intéresse un territoire non accessible à l'alcoolisation périphérique, ou dans les formes plus étendues ou lorsque le malade insiste pour qu'on épuise toutes les possibilités avant d'envisager l'acte opératoire; c'est pour éviter une opération chirurgicale que certains préfèrent utiliser une technique non sanglante.

L'injection d'alcool dans le ganglion de Gasser, à travers le trou ovale, permet d'obtenir une neurolyse des cellules ganglionnaires. (Sem. Hop. Paris). Théoriquement elle permet d'atteindre, suivant la direction et le dégré de pénétration de l'aiguille, la zone cellulaire correspondant au maxillaire inférieur, puis celle du maxillaire supérieur et enfin celle de l'ophtalmique.

L'alcoolisation a ses partisans. Ces derniers trouvent en elle le moyen le plus efficace pour guérir la névralgie essentielle; cependant elle a aussi ses détracteurs. Ils ont presenté des objections contre ce mode thérapeutique.

OBJECTIONS:

A) Les accidents sont nombreux. L'alcool peut pénétrer dans les espaces sous-rachidiens et s'y diffuser; ce qui peut être, affirme-t-on, l'origine d'une paralysie de certains nerfs crâniens, plus particulièrement des nerfs oculo-moteurs ou du nerf facial.

B) Une autre objection, qu'on appelle objection majeure, est que cette technique tend à détruire le Ganglion de Gasser; or les neurochirurgiens se sont efforcés de perfectionner le traitement chirurgical, pour éviter de toucher au ganglion car ils avaient été impressionnés par les accidents de la gasserectomie. En effet, à côte des neurones purement sensitifs, le ganglion contient des centres sympathiques, dont la destruction ou l'irritation peuvent provoquer des troubles trophiques ou aboutir à l'installation d'algies continues.

C) Un derner inconvénient est que lorsque l'opération échoue et qu'il faut intervenir, la neurotomie rétro-gassérienne est alors indispensable, mais elle est rendue difficile, voire même impossible du fait de l'adhérence intime entre la méninge et le ganglion.

Nous donnons ici la formule employée le plus souvent pour faire l'alcoolisation.

Formule de Blair-Ivy.

℞

Novocaine hydrochloride ...	2	pour cent
Chloroforme	5	pour cent
Alcool	70	pour cent
Eau	23	pour cent

D'une manière générale la concentration d'alcool pour cette solution varie entre 70 et 96 pour cent. Certains cliniciens préfèrent cependant une concentration allant de 70 à 80 pour cent. La dose d'alcool requise varie entre 2 à 4 cc.

L'alcoolisation n'est pas définitive. Après plusieurs injections, l'alcool reste sans effet. L'organisme semble s'y habituer et les résultats restent franchement négatifs. C'est l'un des motifs déterminant à mettre de coté cette technique, si séduisante qu'elle soit, pour recourir au traitement chirurgical.

TRAITEMENT CHIRURGICAL

HISTORIQUE:

Les premières interventions chirurgicales opposées à la névralgie du trijumeau furent la section des branches périphériques puis la gassérectomie. La première fut rapidement abandonnée, car elle ne donnait aucun résultat durable; la seconde était gavée de graves complications secondaires. Après que Frazier eut pour la première, fois, en 1901, appliqué la technique de la neurotomie rétrogassérienne par voie temporale, ce fut ce mode d'intervention, qui fut utilisé presqu'exclusivement. Tout d'abord la neurotomie était totale et respectait uniquement la branche motrice. Pour éviter les complications oculaires, tout spécialement la kératite neuro-paralytique, la neurotomie partielle fut préconisée, les filets ophtalmiques étant respectés. Plus tard Dandy jugea plus rationnel de sectionner la racine à sa sortie de la protubérance, car à ce niveau, les fibres de la sensibilité douloureuse paraissent groupées dans le tiers postérieur de la racine et leur section y est aisée; on obtient ainsi la suppression de la douleur tout en respectant les autres modes de sensibilité. De plus, Dandy voyait un autre avantage, celui, de dépister, à ce niveau, une tumeur cause possible de la névralgie.

Ces diverses méthodes ont eu des partisans et des critiques. D'importantes discussions sur leurs avantages réciproques n'ont pas abouti à une conclusion unanime. (Sem. Hop. Paris 1947.)

Considerations Anatomiques

Le traitement chirurgical est dominé par la notion anatomo-physiologique du groupement des fibres. Voila pourquoi, nous nous permettons d'exposer ici ce qui a été écrit à ce sujet dans une étude parue dans la Semaine des Hôpitaux de Paris.

"Anatomiquement, les fibres du trijumeau gardent une certaine systématisation. Dans le ganglion de Gasser se trouvent juxtaposées, de haut en bas, des zones cellulaires qui correspondent aux trois branches du nerf émanées de ses cellules; les fibres radiculaires, qui se groupent dans le tronc du trijumeau, ont à leur emergence du ganglion une systématisation identique; en haut se trouvent les filets du contingent ophtalmique, qui sont quelquefois isolés en trois petits faisceaux grêles. Au dessous, se trouvent les fibres correspondant au maxillaire supérieur et qui forment un groupe plus volumineux. La partie inférieure du tronc nerveux est faite du très important contingent du maxillaire inférieur.

Ces trois contingents, dans leur trajet vers la protubérance, réalisent un mouvement d'enroulement sur leur axe, au cours duquel, un regroupement des fibres s'opère. A la partie juxta-protubérantielle les fibres de la sensibilité douloureuse se sont groupées dans le 1/3 postérieur de la racine, mais la systématisation correspondant aux branches du nerf a disparu. Ainsi aux points extrêmes du tronc nerveux, les fibres présentent des ordres de groupement, en avant, auprès du ganglion, la systématisation est topographique, alors qu'au contact de la protubérance, elle est essentiellement fonctionnelle. Entre ces deux points, les fibres s'enchevêtrent et il n'existe pas de systématisation possible."

D'après ces considérations, il n'y a que deux endroits où une section précise peut être opérée, soit en avant au ras du ganglion pour anesthésier électivement une zone déterminée, soit en arrière, auprès de la protubérance, pour interrompre presque exclusivement les voies de la sensibilité douloureuse.

(à suivre)

L'Hôtel Bessborough, de Saskatoon, où se déroulera le Congrès National de l'Association Dentaire Canadienne, les 5, 6, 7, et 8 juin 1949.

Dans le monde dentaire

Dépenses de congrès deductibles pour l'impôt sur le revenu

Il nous est agréable d'annoncer que le Ministère du Revenu National vient d'accorder aux membres de la profession dentaire un dégrèvement d'impôt, en ce qui a trait aux dépenses occasionnées par l'assistance aux congrès. Voici le texte de cette ordonnance:

"A partir du 1er janvier 1948, les dépenses raisonnables, encourues par les membres de la profession dentaire, pour assister aux réunions dentaires suivantes, pourront être déduites comme dépenses de bureau du revenu professionnel et seront acceptées comme telles par les autorités de l'Impôt sur le Revenu:

1) Un Congrès par année de l'Association Dentaire Canadienne.
2) Un Congrès par année d'une Association Dentaire provinciale.
3) Un Congrès par année d'une Société Dentaire ou d'une Association de Spécialistes, au Canada ou aux Etats-Unis.

Les déboursés alloués doivent être raisonnables et doivent être dûment circonstanciés; par exemple, on devra indiquer (1) les dates du Congrès, (2) le nombre de jours de présence, avec preuve à l'appui, à l'aide d'un certificat officiel de présence émis par les organisateurs de la réunion, (3) les dépenses encourues, en séparant (a) les dépenses de transport, (b) les repas et (c) les dépenses d'hôtel, pour lesquelles on devrait demander des reçus et les conserver pour des vérifications possibles.

Aucune des dépenses ci-haut mentionnées ne peuvent être déduites d'un revenu provenant d'un salaire, puisque des déductions semblables viennent en conflit formel avec les statuts de la loi d'Impôt sur le Revenu."

Des certificats officiels seront envoyés à tous les membres, qui ont assisté à la dernière réunion de l'Association Dentaire Canadienne, à Murray Bay, au mois de juin. On doit porter une grande attention à la phraséologie de cette ordonnance. On peut se servir de ce privilège seulement dans les circonstances indiquées et pour les dépenses mentionnées. On doit se rappeler que le dentiste devrait garder ses reçus pour les produire au besoin. Des recommandations seront données par les Collèges provinciaux au sujet de l'item No 2.

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Cotisation à l'A.C.D.

A une réunion du Conseil des Chirurgiens-Dentistes de la Saskatchewan, tenue le 18 octobre 1948, une résolution fut approuvée pour augmenter l'octroi à l'A.D.C. à $10.00 par membre, à commencer par la cotisation de 1949.

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Cotisation à l'A.D.C.

Le Collège des Chirurgiens-Dentistes de la province du Manitoba vient de porter la cotisation annuelle de ses membres à l'A.D.C., de $8.00 à $10.00, avec un effet rétroactif pour 1948.

Cours de perfectionnement à l'Université de Montréal

Les cours post-scolaires suivants sont offerts à la profession durant le mois d'avril, à la faculté de Chirurgie Dentaire:

Pédodontie	les 29, 30, 31 mars et le 1er avril 1949
Endodontie	les 5, 12 et 19 avril 1949
Prothèse	du 4 au 9 avril 1949
Orthodontie	du 11 au 23 avril 1949
Prothèse	du 11 au 23 avril 1949
Chirurgie	du 18 au 23 avril 1949

Les inscriptions doivent être adressées au Doyen, 2900 Boul. Mont-Royal, Montréal.

Le Corps Dentaire Royal Canadien

Le Corps Dentaire Royal Canadien est actuellement a préparer l'histoire de la deuxième guerre mondiale, qui doit être incorporée avec l'histoire du Corps Medical Royal Canadien. Cette histoire comprendra un chapitre complet, chronologique avec les développements et les activités du Corps Dentaire et un autre chapitre spécial sur l'avancement professionnel en chirurgie dentaire. En vue des expériences variées, individuelles, qui n'ont jamais été officiellement écrites, il y a lieu de croire que beaucoup de faits historiques seront omis s'ils ne sont pas portés à l'attention de l'historien.

Une histoire de cette nature, dans un ordre chronologique seulement, basée sur les rapports officiels, est nécessairement incomplète et ennuyeuse. Les anciens officiers sont priés de soumettre toutes leurs expériences personnelles qui n'ont pas été rapportées.

Tous les anciens membres qui veulent contribuer à la rédaction de cette histoire sont priés d'envoyer leurs mémoires au Directeur Général des Services Dentaires, Ottawa, Ont.

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Réunion de l'Exécutif de l'A.D.C.

Le Comité Exécutif de l'Association Dentaire Canadienne s'est réuni, à Toronto, les 28 février et 1er mars 1949. Des questions d'intérêt pour la profession ont été discutées par les membres du Comité et des décisions importantes ont été prises. Un rapport de cette réunion sera publié sous peu.

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Nouvelle publication du Ministère de la Santé

La Division Dentaire du Ministère de la Santé et du Bien-Etre Social vient de publier une nouvelle affiche intitulée: "De la première à la dernière". Cette nouvelle publication et d'autres publications d'intérêt éducationnel peuvent être obtenues du Ministère de la Santé de chaque province.

Congrès annuel de l'A.D.C., à Saskatoon, du 5 au 8 juin

L'Association Dentaire Canadienne et la Western Canada Dental Society invitent chaleureusement tous les dentistes canadiens au Congrès annuel, qui aura lieu en juin prochain. Il ne semble pas nécessaire aux organisateurs de cette réunion de souligner l'importance de réunion de ce genre: acquisition de nouvelles connaissances, renouement de vielles amitiés et éclosion de nouvelles. Les divers comités en charge de l'organisation travaillent à faire de ce congrès une occasion unique de bénéfices scientifiques et de récréation.

Des cliniciens de marque, comme:

1) Le docteur P. G. Anderson, de Toronto, sur "La dentisterie opératoire"
2) Le docteur W. J. Pryor, de Cleveland, sur "La prothèse"
3) Le docteur J. C. Brauer, de Seattle, sur "La pédodontie et la dentisterie préventive" seront présents.

Le Journal de l'A.D.C. publiera, dans la livraison suivante, le programme au complet. A ceux, qui se proposent de se rendre à Saskatoon, les organisateurs suggèrent, à l'issue du congrès, une visite au Parc National Prince Albert, en Saskatchewan, ou à Jasper ou Banff, en Alberta.

On peut obtenir tous les renseignements en s'adressant au docteur L. D. Haselton, 808 Canada Building, Saskatoon.

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Fédération Dentaire Internationale

La réunion annuelle de la Fédération Dentaire Internationale aura lieu à Milan, Italie, du 30 mai au 5 juin 1949. Des travaux scientifiques seront présentés par des sommités mondiales du monde dentaire et des conciles de toutes les associations dentaires de tous les pays seront tenus. On peut obtenir tout renseignement, en s'adressant au Dr Watry, secrétaire de la F.D.I., 35 rue Souveraine, Bruxelles.

Congrès de la Société Dentaire de Montréal

A l'occasion du 25e anniversaire de sa fondation, la Société Dentaire de Montréal organise un Congrès, qui aura lieu à l'Hôtel Windsor, de Montréal, les 2-3-4 juin prochains.

Le programme détaillé paraitra plus tard.

ANNUAL CONVENTION

THE CANADIAN DENTAL ASSOCIATION

IN CO-OPERATION WITH

THE WESTERN CANADA DENTAL SOCIETY

The Bessborough Hotel, Saskatoon
Convention Home of Canadian Dentists
June 5-6-7-8.

INVITATION

With the greatest of pleasure we invite you to this National Convention to be held in Saskatoon on the above dates.

To us it seems unnecessary to point out to you the importance of such meetings—for the knowledge to be gained—old friendships to be renewed and new friendships to be made.

The different committees in charge of arrangements are working hard to ensure your greatest profit and enjoyment.

Such outstanding essayists as

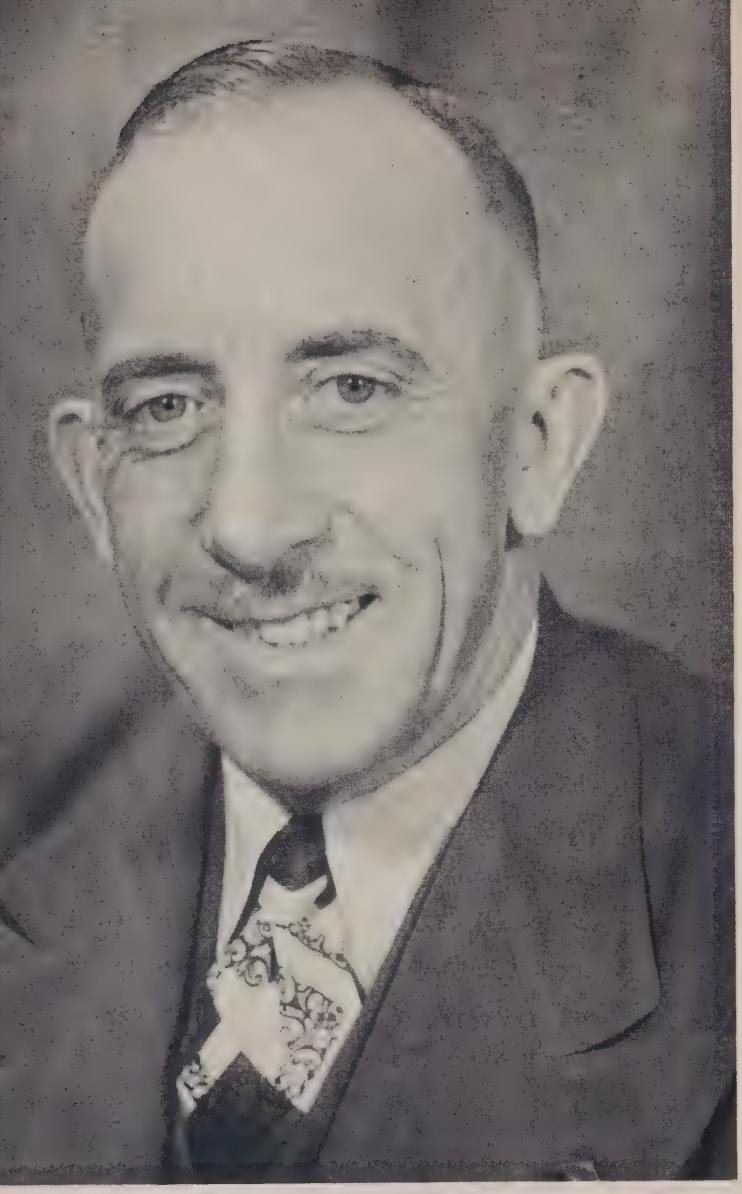
1. Dr. P. G. Anderson, Toronto, Operative Dentistry
2. Dr. W. J. Pryor, Cleveland, Prosthodontia
3. Dr. J. C. Brauer, Seattle, Pedodontia & Preventive Dentistry

will be present. Watch your next issue of the Journal for the complete program.

To those of you considering extending your holiday following the convention, may we suggest a visit to Prince Albert National Park in Saskatchewan, or to Alberta's pride, Jasper or Banff.

Be sure and read the complete program which appears in this issue of the Journal.

Address all communications to Dr. L. D. Haselton, 808 Canada Bldg., Saskatoon.



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Member of the Dental Faculty Council,
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TWENTY-FIVE EASY WAYS OF KEEPING OUT OF TROUBLE IN ORAL SURGERY*

by JOHN GERRIE, Montreal, Quebec

"MAN that is born of a woman is of few days, and full of trouble" Job 14:1. Trouble is defined as a state of mental agitation, distress or worry. Oral surgery is beset with trouble. By consideration of the following twenty-five points it may be possible to escape part of the foregoing biblical heritage.

(1) *Take a history of your surgical patient,* even if only three words "Are you well?" Operating on an unwell patient is often the starting point of trouble. You are entitled to know your patient — has he diabetes, heart disease, high blood pressure, leukemia, pernicious anaemia or any other intercurrent disease? If brief questioning has unearthed the presence of some unwell condition, call his physician and you will immediately have your proposed surgery placed in its indicated category. Tell his physician—"John Smith is here and he tells me he is a diabetic under your care. Such and such is indicated to be done in his mouth. would this fit in with your treatment?" The physician and patient are grateful and an adequate safeguard has been taken against trouble.

(2) *Don't Unduly Discount The Patient's Statement Of Previous Haemorrhage.* If he says he bleeds, take it for granted he may bleed and question him further. If it was only the occasional expectoration of a mouthful of blood-stained sputum, proceed with due caution, but if the bleeding persisted for hours and into the night, or for several nights and had to be vigorously treated, then you had better look into it. A bleeding time may quickly be done by pricking the ear lobe and blotting up the blood with a cotton roll. If bleeding continues for over seven minutes, then there had better be some further investigation. Purpura haemorrhagica, jaundice states and haemophilia must be considered.

(3) *Don't discount the patient's statements of previous difficult extraction.* If he says his teeth are difficult to extract, prepare for a difficult extraction. Check your x-rays, know the root curvatures and the presence of any hypercementoses. You may change a difficult extraction into an easy one by laying back a flap and removing the buccal plate of bone.

(4) *General anaesthesia in the office* —If you must use general anaesthesia in your office, gear your office for it. Modern hospitals now provide recovery rooms where the surgical patient is kept for 24 hours. Suction, oxygen,

*Presented at the Annual Winter Clinic of the Toronto Academy of Dentistry, November 25, 1948.

carbon dioxide, expert supervision and other emergency equipment are immediately available. It is considered unwise to transport the patient recovering from operation by devious corridors and elevators back to the room. Dental operations may present an equal hazard. If you must use general anaesthesia in your office put your elective cases all together on one morning. Have an effective suction ready, recovery and emergency facilities available. You need assistance in using general anaesthesia to stay haemorrhage and retract flaps. The anaesthesia has to be expertly given, controlled and out of your way so you can operate effectively. It is to be hoped the future development of our health schemes will provide facilities, associated with hospitals, where you may take your patients for whom general anaesthesia is indicated, and have this administered by experts, with all recovery facilities at hand and available. There will then be no indication for the use of general anaesthesia in the office.

(5) *General anaesthesia in the office for difficult procedures.* The practice of "diving in and getting something," especially if it may be difficult, leads to trouble. The treatment of impactions, cysts, root tips, etc., are difficult enough procedures in their own right without adding the confusion of copious haemorrhage and poorly controlled anaesthesia. Fractured jaws, wisdom teeth and roots displaced into unexpected places are common trouble resulting from the use of general anaesthesia in the office for difficult procedures.

(6) *Local anaesthesia infections*—It is a credit to the dental profession with so many inferior dental blocks in common use, with so many needles entering such important anatomical areas, that more infections do not develop. Keep up the good work! Don't let your technique down! A retropterygoid abscess is a nasty bit of trouble. It may not have been your fault, but then again, it may have been. In infiltrating, avoid the periosteum and get your needle into the soft tissues above or below the gingivo-buccal sulcus.

(7) *Broken needles*—The day of the broken needle passed along with the advent of the modern, springy, stainless steel type. You can twist a stainless steel needle in circles and it will not break, unless at the hub. The common broken needle trouble of the 1920's should not happen in 1940 unless one is surprisingly careless and neglectful of simple, cardinal fundamentals. It matters little what needle is used as long as it is of sufficient length and is not inserted up to the hub. The use, as was recently drawn to the author's attention, of an infiltration length needle for an inferior dental injection, savours of neglect and is asking for trouble.

(8) *Speed and dexterity* — Proceed with the operative procedure as expediently as possible—get on with it! You are not going to sedate a patient heavily in your office and therefore the patient is apprehensive. If you and your nurse clash and wave instruments around while talking of the oncoming surgery, this apprehension deepens to syncope and even shock. Bring the patient by appointment quickly to a prepared operating room and proceed at once.

(9) *Syncope, Shock and Collapse*:

Syncope is the reflex inhibition or depression of the cardiac and respiratory centres usually of a transient nature responding quickly to treatment.

Shock is the impending failure of the cardiac and respiratory centres due to serious strain and responding slowly to treatment.

Collapse is the failure of the cardiac or respiratory centre or both and death is imminent. Fortunately there are 999 or even 9,999 cases of syncope for every case of shock and collapse. Treat your syncope quickly and effectively—position is the most important procedure. Lay your chair and patient out flat

with the head a little lower than the rest of the body. The ordinary remedies, aromatic spirits of ammonia or amyl nitrite to inhale are effective. A cold cloth on the head is soothing.

Proceed with the operation. Most patients who have early syncope turn out to be good patients and grateful that the operation has been completed.

(10) *Learn to operate in the horizontal position*—It is most helpful when a patient goes into syncope. Use your chair in a low position, suction and an assisting pair of hands. You can modify your technique—upper forceps come in handy for lowers, etc. The apprehensive patient who is liable to faint is most grateful for operation in this position.

(11) *Emergency procedures*—An emergency kit may never be used in your lifetime or you may require it twice in the same day. It should be ready for instant use in your cabinet drawer. You may require it even following local anaesthesia for operative procedures. Your emergency kit is a syringe and four ampoules, two of coramine (1½ cc) and two of ephedrin sulphate (¾ grain in 1 cc). Watch your patient *as you proceed with the operation,* you will quickly become aware if the faint is not responding to your treatment and is deepening into shock and collapse. Don't go injecting stimulants for the ordinary faint, but if shock becomes evident, abandon your operative procedures and quickly inject 1½ cc coramine. The circulation may be collapsed so intravenous injection is better if you can do it. Don't spend time looking for a vein, roll up the sleeve, have a look at the cubital fossa and jab for a vein. If you don't hit one, inject anyway. Repeat the coramine if no improvement in 30 seconds. If still no improvement, use your other stimulant, preferably one ampoule of ephedrin sulphate. Keep your patient warm and watch the recovery carefully. If respiration fails, begin artificial respiration at once and don't abandon it. Remember a patient can live without food and water for long periods of time, but 30 to 45 seconds without oxygen means death. Here again is an advantage of the prone position, you can get at the head of the chair and begin immediately with your artificial respiration.

(12) *The flap operation*—Learn to use the flap operation. It can change a difficult operation into an easy one, for example the removal of a large upper cuspid. It allows you to see what you are doing, bleeding is less and easier to control and healing is better. Use any flap you like, they will all heal, but use a flap.

(13) *Scalpel blades*—The detachable type of scalpel blade is excellent, but some blades must be used not at all in the mouth, or with great caution. The No. 11 Bard Parker blade so often advocated is dangerous. While you are cutting with the point, the heel may be lacerating the lip or cheek. It has no place in the mouth. The No. 12 blade is occasionally useful in hooking up the floor of the mouth or the third molar region. The No. 15 blade is useful for most any procedure in the mouth and gives a safe, accurate, controlled cut in any region. The blades numbered 20 and 23 are too large and therefore unsafe.

(14) *Burs and bone drills*—If you must use drills, use standard, large surgical burs under absolute control in a straight hand-piece. They are sometimes useful for making convenience or leverage points next to roots that have broken at the gingiva. Beware of the small cross-cut fissure or round bur in a contra-angle hand-piece. They break easily and it is often discouragingly difficult to find the bur head.

(15) *Bone chisels*—are a necessary bit of armamantarium in any mouth surgery. A few well-selected ones are all you need. The straight Gardner chisels are excellent for any anterior

work and heavier duty gouges are helpful in the more vigorous third molar bone removal. A quick, decisive tapping control with the pen grip is the best method, but if one is forced to work without assistance, the hand-driven or motor-driven automatic mallets have certain advantages.

(16) *Rongeurs and bone files*—The bone file is a fussy, time-consuming instrument and using it, it is well to remember that polished bone heals poorly. If there is room, the bone file work may be done more effectively and quickly with the rongeurs.

(17) *Curettes*—Beware of curettes and if you must use them, use them for enucleating granulomata rather than for scraping bone. If there is any acute or subacute infective process present don't use them at all. They have little indication in surgery of the mouth and their ill-advised use is all too frequently one of the factors in producing osteomyelitis.

(18) *T-shaped exolevers*—are nice instruments but must be used with caution because of the extreme power that may be exerted from the cross-bar. Use them with a finger along the shaft and with a guarded wrist motion, never a full arm twist. All too often trouble in the nature of a fractured mandible is traceable to the abuse of this type of instrument.

(19) *Suction tips*—Available suction is a great adjunct to most any surgery of the mouth. If an extra pair of hands are available the suction tip used as an alternate suction and retractor gives valuable aid to a difficult procedure.

(20) *A well-placed suture* — speeds healing and avoids complications. A medium-sized needle driver and two sizes of half curved cutting needles will meet your every need. A cutting needle because the gingival tissues are tough and you will have to struggle to get a round needle through them. A full half-curve needle,—medium or large size for the third molar region and medium for the anterior regions. For suture material, all you need is number 40 black spool silk or cotton that you can prepare yourself. If notion counter spool cotton is beneath the dignity of your profession, the suture houses prepare a fine array of silks and cottons, braided and otherwise, in a confusing multiplicity of sizes, on spools and otherwise or in attractive tubes with needle attached ready for immediate use. Catgut has no place in the mouth, it is absorbable and always becomes infected. The silkworm guts and dermalons are stiff and uncomfortable. Silk lies flat, undergoes a minimum of infection and can be snipped out without pain after 5 or 7 days.

(21) *Fractures*—If you must treat fractures, treat the simple ones by the ordinary methods. Remember that about 75% of jaw fractures can and should be handled by the ordinary dental methods of intermaxillary fixation. —The eyelet wire method popularized by Ivy and Curtis, any of the loop wire methods, the Risdon arch by your own Doctor Risdon of Toronto, the Winter and Jelenko arches are all good methods that you can handle if they are indicated and there are no complications. Leave the difficult problem fractures to your colleagues who are looking for trouble. The direct interosseous wiring method, the double pin methods of Stader and Roger Anderson have a useful place in mouth surgery but may involve trouble.

Again if you must treat fractures, be sure of the adequacy of your x-rays. If a fractured jaw is suspected, three routine x-rays are necessary,—the overall anteroposterior survey x-ray which enables you to follow the lower border of the jaw from condyle to condyle and two lateral x-rays for detail. In these there may be indication for a further x-ray of the symphysis.

(22) *Damage to the maxillary antrum*—It is, in many cases, impossible to remove certain upper molars with-

out severe damage to the antrum. Being forewarned is to be forearmed and it is wise to use caution with adequate x-ray coverage of extraction procedures in this area. If a large part of the antral floor does come away, it is no cause for panic,—you have done your best. Save the mucous membrane, peel it off your bone-tooth fragment, gather together and suture it as any tissue laceration. It will probably heal without further incident. If a root is lost in this area, you have the tooth and you know which root and about how much of it is missing. Don't probe and don't enlarge through your socket because then you will lose the root. It is surprising how many of these "missing" roots are still in their socket, or just tipped over adjacently underneath the antral mucosa. Lay back an ample buccal flap and with rongeur or chisel, under direct vision with good lighting, take away your buccal plate of bone. In a large percentage of cases you will recover the root without serious antral damage. Your flap folds over the bone and closes the socket.

(23) *Tumours of the mouth*—You are the first people to see malignancy. Early cancer is painless and curable. Late cancer is painful and incurable. Know your benign tumours,—remove them completely and submit them to your provincial laboratory for an accurate diagnosis. Beware of obtuse swellings, ulcerations that don't heal, teeth loosening for no apparent reason and any fistula that doesn't heal. Don't temporize. Follow a case through until malignancy has been proven and is in adequate hands for its effective treatment. Set yourselves up as outposts for cancer discovery, not for cancer treatment.

(24) *Sulphonamides and penicillin*—These drugs have changed the faces of medicine and surgery, but they will not do your surgery for you. You must do the surgery and along exactly the same lines and with the same care as before the days of these wonder drugs. They are your second line of defense and will divert and prevent a lot of trouble. If you use them, use them adequately,—don't send a boy on a man's errand. The sulphonamides are still useful and have not been replaced by penicillin. They are especially useful as adjuncts to office surgery. If a complicating infection is threatening or imminent give the patient 36 tablets (7½ grain) of sulphathiazol or sulphadiazine with instructions to take four tablets at once and two tablets every three hours. This will suffice for 48 hours, raise the blood level quickly to adequate treatment level and ensure your drug effect. At the end of 48 hours you can reassess the situation and act accordingly. Forget about the sodium bicarbonate for such short dosage.

Penicillin given by intramuscular hypo is probably more certain, but it must be given intensively and every three hours to be sure of the effect. Unfortunately the oral and delayed action preparations are not as yet sufficiently dependable.

(25) *Face your trouble*—Even if with observation of the foregoing twenty-four points, trouble unavoidably happens, face the trouble. Hiding from trouble only makes for double trouble. If you have inadvertently broken off a root, fractured a jaw, broken a needle, opened an antrum, are saddled with a serious haemorrhage or infection, keep your head up. It is your "baby" and you must follow through until the trouble is over. You are an upright practising dentist with at least average ability and you have done your best. Tell your patient of the trouble as briefly and quickly as possible and just what you propose to do about it. They are in the trouble too and will probably be understanding and helpful. At least they will be grateful for knowing. You have confrères, adequately trained along special lines who will be only too glad and ready to help you and your

patient. Their help will take a load off both your minds. It is the poking of the head, your head and not the patient's, into the sand, the hiding from reality that leads to lawsuit and further trouble.

Compulsory Health Insurance A Step in Wrong Direction

by DOROTHY THOMPSON

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It seems certain that we are going to take another step on the road to bureaucratic collectivism by the passage of a compulsory health insurance bill, to which President Truman is pledged.

The United States Public Health Service is for it, as every Government agency is always for a vast expansion of its powers. The labour unions and farmers' organizations are for it because it sounds good. Industry would like to saddle the Federal Government with the expense of workmen's compensation cases. Professional social workers foresee great opportunities for themselves. And a mere 150,000 physicians, 90 per cent of whom are against it, cannot buck the trend. Besides, they are supposed to be "prejudiced," on the current theory that those who know most about anything are not reliable witnesses.

Also, the opposition has not been intelligent. It has ranted against "socialization" as though the mere word had conjuring powers. Let this opponent, therefore, make herself clear. I am not against it because it is "socialistic," but because it is the application of national socialism in the least appropriate field. Also, I have lived under such medical systems in England, Austria, and Germany, and they were awful.

They cost the people far too much. They provide inferior services at a high price. They are incapable of dealing with really serious and complicated cases. They result in two sorts of medicine—good medicine for the well-to-do; and bad medicine for the masses, at high cost to those who can least afford it. And they build up a vested interest of physicians and bureaucrats which the people will never get rid of.

The great joker in all these schemes is that they are put forward as "free," meaning something for nothing. Let their proponents at least tell the truth. What is advocated is compulsory insurance.

Every worker in this country will have the cost subtracted from his pay envelope, and added (by his employers) to the price of everything he buys. He will be paying for unused aspirins when he needs the money for oranges. He will be supporting innumerable filing clerks—a horrendous paper staff for 150 million people. When and if he gets ill, he will find himself as one of 50 patients (half of them hypochrondiacs bent on getting service for their money) whom a physician must examine in an hour!

And if he really is ill—and finds that under the slap-happy method of overworked doctors, whose fees are assured anyhow, he gets not better but worse—he finally will in desperation consult one of those private physicians who refuse to join the assembly line, and, atop all he already has put up, week by week, pay a private fee.

How do I know this? Because I have experienced it.

Just why this most inventive country seems compelled blindly to copy social measures originating elsewhere is baffling. We need better health service. Granted. We need many, many more hospitals. The existing hospitals

need public aid, since the sources of private support are increasingly drained off in taxes. And we need more genuinely free medicine for people in real jams.

But before Congress passes any bill for universal sickness insurance — falsely called "health" insurance — it owes it to the American people to tell them exactly what a person with, say, an income of from $2,000 to $3,000 a year is going to have to pay over a working life of 40 years to take care of his illnesses, and just what services the Government positively guarantees him in return for his money. Will it, for instance, sign on the dotted line that if his wife is in labour, the Government guarantees a bed and a physician at the critical moment?

Don't make me laugh! I've lived under these schemes.

The question to ask yourself is whether or not you wish to become government dentists, working under contract with the federal government, carrying on your professional careers in accordance with rules laid down in Washington. The principle at issue is the freedom of dentistry and the future of your profession. If I was speaking to a medical group, I would say that the issue at stake is the freedom of medicine, or to a group of nurses I would say the freedom of nurses, and if I was speaking to the general population, I would say that the question at issue is the freedom of the American people. I know there are some dentists who have no objection to working full time for the federal government. They like the steady salary, the security, the retirement annuity. They are, for the most part, men to whom security has meant a great deal. They tie their lives to the issue of security as though that were the most important thing in life. Some do not dare to try to make a living in a competitive market, or they tried and failed and then went into government service. Others, I know, sincerely believe that the only way to furnish dental service to the whole population is through a federal salaried service under the auspices of the U.S. Public Health Service. But I believe that I am correct in thinking that the majority of dentists believe in the private practice of dentistry. They believe that they can do a better job if they decide individually how many hours a day they can work effectively, and how they should carry on their profession task.—Marjorie Shearon, Ph.D., Editor of American Medicine and the Political Scene, Washington, D.C., in F. Rev. of Chi. D. Soc., Feb. 1, 1949.

We are faced with great problems, and soon we must make fateful decisions. In mapping out our course, we should be guided by beacons which we kindled many years ago. Our Association was formed, primarily; to cultivate the science of medicine and surgery, to advance the character and honour of the medical profession, to promote the public health. If we are confronted with a plan of health insurance which will in any way impede the practice of scientific medicine, the march of medical research or the education of our undergraduate and postgraduate students—we must oppose it. If the plan will affect adversely the independence, the dignity or the economic status of practitioners of medicine—we must oppose it. If the plan fails to facilitate the provision of adequate medical service for all the people—we must oppose it. Conversely, if a plan of health insurance is such that medical science and medical research will be fostered, if it is such that the professional and personal interests of the doctors will be safeguarded, and if it is such that we will be enabled to bring to poor and rich alike the best which medical science has to offer—then in wisdom and in honour we may lend it our full support.—Wm. Magner, M.D., in Can. Med. Assoc. Jour.

National Health Service Act of Great Britain*

by DON W. GULLETT, D.D.S., Toronto, Ontario,
Secretary, Canadian Dental Association

Purpose of Report

TO EXAMINE the Act itself and the endless regulations would be a most tedious procedure and will not be the purpose of this report. An attempt will be made to cover the more outstanding points and make observations on the same as obtained during my investigation, through interviews with government health officials, representatives of health professional bodies, and individual members of professions, together with personal conclusions.

All observations contained are made from the Canadian point of view and are not meant to be critical of any individual.

This latter statement is made in view of the generous courtesy extended to me by everyone. Even confidential reports, which this is not, have a way of getting from place to place. Consequently, it is my hope that the above purpose will be fully understood.

General Statement

The attitude of both government officers and officials representing professional organizations upon the underlying principles of the need for adjustments in health services is practically uniform. All agree that necessity existed for new arrangements in order that modern health services could become available to all the population. The differences have occurred as to the methods by which the services were to be carried out.

On the other hand it is but fair to state that numerous government health officials, when I pointed out the destruction of incentive under the scheme, stressed the measures being taken to cultivate initiative by means of placing men in a safe financial category, providing fully paid for postgraduate courses and making provision for promotion within the service. Illustration was given that the greatest contributions to health sciences have usually been made by the most illy-recompensed members. Admission was made that it would not be easy to cultivate professional advancement among general practitioners under a more or less uniform basis of payment and also that controls would be necessary to deal with cases of bad service.

All in all the situation can be summarized in saying that the whole scheme is one grand experiment in the realm of health services taking place in the social laboratory of Great Britain. Its success or failure will have repercussions elsewhere and consequently the progress of the experiment is of importance to every individual member of any health profession in the world.

A good account of the controversy following the introduction of the Health Insurance Bill of 1911 is given in the Britannica Year Book for the year 1913. An interesting comparative analysis can be made between the professional reaction at the time to what has been taking place in respect to the present legislation. Note must be taken of a changed attitude in that the dispute of 1911-14 was one of entire opposition by professional groups, while the recent opposition was not to the principle aimed at but rather one of how it was to be done. The importance of this changed thinking on the part of professional men should be par-

*Condensed from Report as presented to the Committee on Health Insurance of the Canadian Dental Association, November 8, 1948.

ticularly underlined because it represents social change within the professions.

Again, it should be repeated that representative health professional bodies have repeatedly agreed with the underlying principles of the movement and it is only upon the modus operandi that disagreement has occurred. Freely, it is stated that decisions must be made on the basis of what is good and what is not good social progress.

Controversial Issues

Since the beginning of the discussions two main issues, among many minor ones, have stood out, (1) clinical freedom and (2) basis of payment.

(1) *Clinical Freedom*

The accusation was made by the representatives of the professions that the Minister becomes an actual dictator of health services. In reading the legislation one certainly gains such an impression for the wording is such that the Minister appears practically in every instance as the supreme ruler in all decisions. Defence of this position is offered by the government by stating that the Act is no different from any other legislation in this respect; that the Minister accepts the responsibility for the carrying out of the legislation and that in reality the Minister actually in practice accepts the advice of his advisors. However true this may be, it is self evident that the Minister possesses tremendous powers over the health services rendered under the legislation.

(2) *Basis of Payment*

The method of payment for professional personnel is a most difficult matter under any government health service plan, particularly so is this true in respect to dental personnel. The difficulties experienced in the different countries with national health plans in effect give adequate proof of this statement. Anyone who can devise a satisfactory plan for all concerned, for the payment of dental personnel will deserve great credit indeed.

Under the British plan medical personnel are paid upon a per capita basis which means a certain set amount per annum for each patient accepted by the medical practitioner and the maximum number of patients which he can accept is limited. The representatives of the dental profession refused to accept this basis of payment and held out for what is known as a grant-in-aid arrangement which was refused by the government. Grant-in-aid is a system whereby the government sets a fee for each operation but the dentist is permitted to continue to charge his fee and the patient pays the difference between the government fee and the dentist's personal fee. This system is in operation in several countries at the present time. The refusal of the government was based upon the argument that such a system had not been successful in other countries.

The result is that the dentists continuing to practise in their private surgeries are paid upon a set fee schedule with no variation of the fee whatsoever and those who practise in a health centre are paid upon a salary basis. Owing to building difficulties in Great Britain health centres will not become numerous for several years. But, it is obviously proposed, and openly stated by the government, to ultimately have dental health services performed in health centres by salaried dentists. This would mean the placing of members of the dental profession in civil service status and is the crux of the argument between the profession and the government. The Association opposes such arrangement because it is said the speed of the slowest horse becomes the speed of all and is fearful for the future community dental health service under such arrangement. In addition it is not thought that initiative can be retained in professional ranks by the methods suggested by the government when the basis of payment becomes a salary. This is the crucial issue faced by the dental profession in Great Britain and accounts for the main reason why the

British Dental Association has instructed their members not to sign into the scheme.

The British Medical Association representing virtually all the medical practitioners of Great Britain, or at least in that there exists no opposing representative organization, saw this same possibility. Through a series of plebiscites they refused by a large majority to cooperate until complete assurance was given them by the government that they would not be forced to become civil servants. In a plebiscite taken after the assurance was obtained medical practitioners, by a slight majority, still refused to cooperate. In this situation the British Medical Association took negative action in that they did not instruct their members not to join.

Owing to the lack of unity within the dental profession, the dentists were not able to take concerted action. It was known that large numbers, especially members of the organizations other than the British Dental Association, were willing to accept the terms; —information which was known by the Minister. As a result, at the end of one month's operation of the scheme over 90% of medical practitioners had signed and approximately 50% of the dentists had agreed to cooperate.

Dental Practice Under Former Health Insurance Plan

Before proceeding to further explanation of the adopted arrangement some statement of dental practice under the preceding health insurance scheme is necessary. Five-sixths of the total cost of these services was for extractions and dentures which demonstrates that the service was definitely not of a tooth saving character. It is said that a great number of dentists, who limited their practices to health insurance patients, hardly ever inserted a filling and did not need to do so in order to do well financially under the old Act.

The new legislation has made a real endeavour to correct this situation by lending encouragement to the practice of conservative dentistry. As will be seen presently, this is particularly true in respect to the fee schedule period. In addition priority is given to dental treatment for expectant mothers and children. This directed aim is most creditable and indicates careful thought in directing the scheme.

Computation of Basis for Payment

The method used in order to arrive at the adopted fee schedule is worthy of note. A committee, known as the Spens Committee, was appointed by the Government to bring in a report upon the remuneration of general practitioners of dentistry. This committee made an exhaustive study of the subject upon a scientific basis. Recommendations were made in terms of net income and also in terms of 1939 value of money, leaving necessary adjustments to present conditions for others. Evidence was secured of the incomes received by dental practitioners during the years 1936, 1937 and 1938.

A few of the points stated in this report may be of interest:

1. That the difference between the incomes (net) of those in large towns and those in small towns was not so large as to make separate consideration necessary.
2. That 75% were found to have incomes under £1,100 a year, "showing that very few dentists make large incomes, that most dentists are making net incomes of less than enough to meet minimum middle class expenditure, and that a quarter of the profession of necessity live below this standard."
3. That the practice of dentistry is exceptionally arduous.
4. That "a very real limit upon the number of hours that a dentist can be expected to work at the chairside without loss of efficiency" is imposed. Conclusion was reached that 33 hours a week by the chairside for 46 weeks in a year or approximately 1,500 chairside hours a

year together with the necessary hours spent away from the chair represented employment which would not impair efficiency.

5. That recruitment to the dental profession has been far from satisfactory and that the profession should be made more attractive.
6. That a dentist working efficiently with appropriate assistance and for the hours stated above should receive £1,600 net income in terms of 1939 values.

This report was not presented until May 1948 or within a few days of the appointed day (July 5th) for the Act to come into force. As soon as the report was adopted it was converted to the year 1948 terms by adding 20%, which, less superannuation (6%) equals £1,788 net income per annum or £1. 3s. 9d. per hour based upon the recommended 1,500 hours per year. The last available report was for the year 1939 which gave the ratio of 48% of gross income representing costs. In order to equate the costs in terms of the year 1948, the government increased the cost ratio to 52% which gave a gross income of slightly over £4,000 per annum. On the accepted basis of 1,500 hours per annum an hourly basis of between £2. and £3. was obtained. It was calculated that a simple amalgam filling required one half hour for completion and as a result of the above calculations the fee for this operation was set at £1. Other fees were estimated accordingly.

The Spens Report and the adjustments made by the government were considered to be eminently fair. Undoubtedly many dentists, who had determined to stay out of the scheme, joined when the scale of fees became known, being influenced thereby. Representatives of the dental profession, however, immediately pointed out that the ultimate objective was not payment by means of a fee schedule but on a salary basis and once a dental practitioner gave up his private practice it would be exceedingly difficult to again resume private practice if the service itself or future adjustments in the payment to practitioners did not suit him.

The fee schedule applies to dentists who are practising elsewhere than at a health centre and supply their own surgeries. As a matter of fact, regulations are set forth stating what kind of service shall be supplied, how the surgery shall be equipped and also that upon proper notice, the Regional Dental Officer shall be admitted to inspect the premises. The regulations also prescribe the charges payable by persons in respect of the supply, replacement or repair of dental appliances of a more expensive type than the standard type and in respect to special dental treatment.

In the case of expensive dental appliances and special dental treatment, the dentist "shall submit to the Dental Estimates Board an estimate of the normal charge on a special dental estimate form and a further estimate of the additional or special charge . . . Before submitting the forms the practitioners shall obtain the signature of the person concerned to the further estimate and shall not proceed with any treatment other than emergency treatment or in case of repair treatment not exceeding £2 until approval is given."

Specific details are set forth in respect to the conditions of treatment and the materials to be used. The nature of the material to be used must be indicated on the submitted estimate form.

Sequence of Transaction

In order to present the actual procedure, a simple case is outlined as follows:

1. The patient desiring dental services goes to the post office and consults a list of the dentists of the area who have signed their willingness to accept patients under the service. She selects one of these and proceeds to his address as given on the list.
2. When she arrives at the dentist's office she presents her registration

card and asks him if he will accept her as a patient. (He has the right to refuse.) In the event that he accepts her a form supplied by the government is made out in her name. The patient signs a section of the form stating that she desires treatment by this dentist. The dentist signs a detachable portion of the form and gives it to the patient which is the patient's guarantee of service by the dentist concerned. He probably then makes an appointment for the patient.

3. At the time of the appointment the dentist makes an examination of the patient's mouth and enters on a chart provided on the form for the purpose, a complete report of the condition found including existing dental services, missing teeth, cavities etc. and all details of the proposed treatment and fees for each operation are entered. He must then consult the schedule to see what operations may be proceeded with, without prior approval and those for which he must have prior approval. As will be observed by the fee schedule, he is paid 10s. for this clinical examination and record. The dentist then signs another section of the form stating that he has examined the patient, indicated the clinical condition found and indicated the details of treatment considered necessary. He probably dismisses the patient for another appointment.
4. The time of the next appointment will depend to some extent as to whether or not the proposed treatment may be undertaken without prior approval or when prior approval is necessary. If approval is necessary the form is sent to the Dental Estimates Board for approval. However the dentist may proceed with operations which do not require approval in the meantime. Where approval is required several things may happen e.g., the Dental Officer for the area may be requested by the Estimates Board to examine the patient. In this event the Dental Officer makes arrangement whereby the dentist brings his patient to the office of the Dental Officer or the Dental Officer goes to the dentist's office. The decision of the Dental Officer in respect to the treatment to be adopted is final.
5. When services requiring approval are approved by the Dental Estimates Board the form is returned to the dentist with the section set aside for the purpose marked approved—with alterations or not as the case may be. The dentist may then begin to perform his services.
6. When completed the patient is required to sign a section of the form certifying that to the best of her belief the treatment has been completed and the dentist signs yet another section certifying that the treatment has been completed and claiming a stated amount of fees. (In every case where the form is signed the date must be given.)
7. The dentist then mails the form to the Dental Estimates Board and if authorized for payment the dentist receives payment through the local Executive Council.

The dentist receives this amount less 6% for superannuation. Retirement age is set at 65 years and the dentist then receives this 6% of the amount paid him for his services which he has accumulated during the years plus 2½% interest. He may retire at 65 or carry on if he so desires but in either case he begins to receive the benefit under the superannuation plan.

Bare features of the arrangements for payment are presented here. The details are voluminous and require detailed study. One other point may be of interest in that once the services specified on the form are completed the dentist and patient part company, so to speak, in that the patient is free to seek a new dentist the next time she seeks services or if she returns to the same dentist he may refuse her if he so desires.

Regulations governing the practice

at Health Centres may be interpreted to mean that a new graduate may take a full time position in a health centre with an initial salary of £650 for the first year with annual increments as stated above, whereby after 28 years' service he would reach the salary of £2,000 per annum provided that it is found by his superiors that he is entitled to promotion each and every year. Herein lies one of the greatest fears of the professional man, in that he has more than one master to serve. His ability to succeed not only depends upon serving his patients satisfactorily but also in not causing the displeasure of the numerous persons in authority over him. Difficulty is not experienced in observing that a practitioner may become more interested in serving the master from whom his promotion is derived, than the patient where his whole interest should be centred.

Administration

The administration is complicated. One severe criticism may be offered of all systems whereby social systems are established in place of those of individual enterprise in that the administration becomes necessarily complicated involving a great number of personnel. It must be admitted that the initial regulations now issued require considerable patience upon the part of every practitioner who chooses to serve under them, for their number is great and unquestionably more are to come.

1. *Advisory*

On the national level the Central Health Services Council acts as an advisory council to the Minister upon all matters relating to health services under the Act. The Minister may refer matters for consideration to the Council or the Council may bring matters to the attention of the Minister. Each representative group on the Central Health Services Council possesses a Standing Committee. In respect to dentistry, the Standing Committee is composed of the representatives on the Central Health Services Council together with ten additional members of the dental profession.

2. *Executive*

Regional Hospital Boards—England is divided into 14 regions known as hospital regions and the hospitals in each region are administered by a Regional Hospital Board. In each region is one large teaching hospital with other hospital centres in the region coming under the direction of the large teaching hospital. For each region a hospital for plastic surgery, jaw injuries, impactions, cysts, etc., is being established to which dentists in the region send their difficult cases. Specialists in the service are employed in the hospitals on a salary basis of payment. The hospitals are administered separately from the general health services.

Executive Councils — For purposes of administering the general health services, England is divided into some 22 areas and in each area an Executive Council is established consisting of 24 members representative of all those concerned with the service and of the twenty-four members, three are dental practitioners. In addition there are local committees in the area representing each profession and also a general committee representative of all the professional groups.

Dental Estimates Board — This Board is made up of a chairman, four full-time dental practitioners, two part-time dental practitioners and two laymen appointed by the Minister. The duties are to deal with all approvals of accounts and approvals of services to be rendered where such approval is necessary.

Regional Dental Officer — In each area a Regional Dental Officer is appointed. These 22 Dental Officers are key-men in the administration of dental services. His duties are numerous and place him in the position of acting as a liaison between the administration and the profession. In doubtful cases for approval he calls the dentist concerned and asks if he can see the

patient either at the dentist's office or for the dentist to bring the patient to the regional office.

The government takes the view that as the services are being paid for it is a duty to see that the services are satisfactory and the only way to know if satisfactory services are being given is by means of tests. Random samples are to be taken from time to time wherein patients will be selected (either through suspicion of the dentists' service or not) and the Regional Dental Officer will be asked for a report on the specified patients' services. If the services rendered are found faulty then the dentist will be required to do the services over at no fee or other suitable provided for measures will be taken, as the case may be in each instance.

Tact and diplomacy are surely attributes which should be outstanding characteristics of this official.

Regulations for Controlling the Service

Elaborate controls to regulate the service are contained in some 29 pages of fine print. These regulations deal with provisions relating to investigations, disputes, appeals, etc. and inquiries relating to medical, dental practitioners and chemists.

Referring particularly to how these regulations affect the dentist it is stated "any complaint made by a person against a dental practitioner in respect to an alleged failure to comply with the terms of service shall be investigated by the dental service committee" of the area in which the dentist practises. The Committee conducts an investigation of the complaint, under definite terms of procedure and makes report to the Executive Council of the area.

Future of Private Practice

Under the newly introduced government scheme the dental practitioner has freedom of choice as to whether or not he will join the service. In many instances the choice is extremely difficult depending a great deal upon the type of practice. If his practice is located in an industrial area and the other dentists of the locality join, it becomes difficult for him to stay out. Some take the view that sooner or later they will be forced to join so they might as well go in now. As may be imagined considerable confusion exists at present. Young men do not know whether or not they should invest in equipment. The government has every intention of building attractive health centres in which dentists will be employed and it is problematical what percentage of people will choose to have their dental services performed in them, especially when such services are covered by their contributions to the scheme.

On the other hand it is pointed out by some that the advantages of private practice will always be desired by many; that patients will dislike the necessary procedures under the government scheme; that the government scheme will develop in the direction of economy rather than increased quality of service; and that the only way private practice can lose out is for the government to offer a better service without any red tape. Undoubtedly the economic conditions of the future will be a determining factor. Up to the present dental practitioners have been in no hurry to rush into the scheme, (approximately 50% two months after the scheme came into operation) and it is to be considered that a reasonable percentage of the profession were already under the former health insurance arrangement.

Dentistry's real problem is whole time salaried service in health centres. For the present, health centres do not exist and arrangements are made whereby practitioners may carry on in their surgeries on a fee schedule basis of payment. Medical practitioners gained some assurance that they would not be forced to accept a salary basis of payment but dental practitioners were unable to obtain any promise. The profession fears that the

present arrangement is only a method of squeezing them gradually into a full time service. All express the view that it would be most difficult to enter the service and later withdraw to establish private practice again.

Incentive

The adoption of a uniform basis of payment to all dental practitioners for the same service appears contrary to those motives which have led to professional advancement. The incentive of rendering a better service to patients through the increasing of professional knowledge, with the resulting increased income, is firmly established in professional ranks. Difficulty is experienced in seeing how sufficient incentive can be supplied otherwise.

The government contends that incentive is not being destroyed but rather changed in form. It was pointed out that the dentist has perfect freedom to build a fine patient personnel and it depends entirely upon him what kind of patients he accumulates under the scheme. It is also believed by government officials that the established controls will mitigate attempts on the part of practitioners to produce on a quantity basis rather than the rendering of quality service.

Be this as it may, the fact remains that the practitioner who endeavours to improve himself, conscientiously renders a high quality service and takes a sincere interest in the health of his patient, receives no better recompense than the one who does the opposite in every respect. Altruistic service is admittedly the prime objective of professional health service but when a practitioner's standing in the community, including that of his family, depends entirely upon it without adequate financial recognition, his situation becomes difficult, to say the least.

Conclusions

To predict the future outcome of the whole scheme would be a hazardous undertaking. Undoubtedly there will be many modifications issued in the form of added regulations. One thing is certain, if the arrangement were to prove successful the influence upon health planning in other countries would be considerable.

The professional concept, as we have known it, is changed greatly. Independence, both as a group and as an individual, is drastically changed. A large proportion of the members of a profession prize their independence and chose their vocation in life upon that basis to a considerable extent. Most of the points emphasized in the scheme rest upon the idea of security provided for the members of the profession. In order to secure security it appears that a large portion of professional freedom must be given up. Two basic questions arise. Do practitioners desire their freedom more than promise of security? And secondly, will health services to the public be improved through the provision of government sponsored security for those who render the service?

Critically speaking, the plan attempts far too much in too short a time. Modern thought is that the health problem, if success is to be attained, must be approached from the preventive angle and in the opinion of most informed individuals this is doubly true in the field of dental health. The British Dental Association laid emphasis upon the necessity for giving preference to young children and expectant mothers. As a result, the Act does specify that priority is to be given to these two groups but when consideration is given to the availability of dental services for the whole population, and the number of qualified personnel available, it is hard to see how prevention will become a dominant characteristic of the dental service. Experience has shown that where treatment is thrown widely open to all age groups the most important group from the preventive standpoint becomes the loser. While it is a severe observation to make it is believed by the writer that the scheme as now constituted will show little improve-

ment in true dental health unless more adequate measures are taken to concentrate the available personnel to serve the youngest age groups.

Action of the government in placing the emphasis upon conservative dentistry is a most desirable one. However, it appears that an energetic program of education will be necessary, if the desired purpose is to be achieved. Such health education of the public cannot be accomplished with any degree of suddenness even when attempted by legislation. Well-founded opinion is to the effect that intensive health education programs should precede any such action, which was not done in this plan. Experience in other plans has shown that once large scale treatment is instituted, health education becomes a lost feature because of the magnitude of the task at hand.

No attempt has been made herein to cover the plan in its entirety but rather to set forth the salient features which it is believed are of most interest to those concerned.

A Bacteriological Survey of Dental Impression Materials

by LOUIS GREENBERG, Ph.D., Laboratory of Hygiene, Department of National Health and Welfare, Ottawa.

DURING a Canada-wide bacteriological survey of plaster of paris bandages in which a very high percentage were found to contain pathogenic anaerobic bacteria[1] several specimens of dental plaster, sent in by Canadian Food and Drug inspectors, were found to be highly contaminated with anaerobes. So far as is known, little attention has been paid to the bacteriology of dental impression materials. The significance of such contamination has, therefore, never been established, but since some of the bacteria found were pathogenic and could be a health hazard, it was felt that a bacteriological study of these materials would be in order.

Dental impression materials were obtained from dental supply houses across Canada. One hundred and seventeen specimens were examined. Forty-eight of these were samples of dental plaster (containing plaster of paris) the products of nine manufacturers, and sixty-nine were samples of dental impression compounds (waxes, gums, powders, etc.) from twenty-five manufacturers.

Experimental Procedure

(1) *Medium*: Bacto fluid thioglycollate medium enriched with cooked meat was used. This was put up in gem jar fruit sealers. In every instance the medium was prepared, autoclaved and cooled to 45°C. immediately before use.

For plaster and powders 0.5 to 1.0 grams of sample were inoculated into the test medium. For tubed specimens two procedures were followed: (a) for free-flowing types, 1 to 1.5 inches were used as inoculum and (b) for solid types, the tubes were opened with sterile scissors and the entire contents transferred to the medium. Where the compounds were in the form of cakes or sticks, I cake or 1 stick was used as inoculum. Aseptic technique was used throughout.

The sealers were incubated at 37°C. for one week aerobically. After twenty-four hours of incubation subcultures from the cooked meat were made to two blood agar plates. One plate was incubated aerobically and the other anaerobically in Brewer's anaerobic jars and both were incubated at 37°C. Colonies on the aerobic plates were classified into groups by their colony form and morphology. In general, little attempt was made to

identify the species of the aerobic bacteria.

Colonies from the anaerobic plates were picked and transplanted to cooked meat medium and incubated at 37°C. for twenty-four hours. They were then inoculated into diagnostic media in an attempt to obtain specific identification. Each anaerobic culture was tested for virulence by inoculation into guinea pigs. Wherever possible the identification of the virulent organisms was completed by protection tests with specific antitoxin. Seven days after inoculation a further subculture was made from the original sealers to blood agar plates. These were incubated in an anaerobic jar in attempt to find further anaerobic bacteria.

Results

One hundred and seventeen specimens of dental impression materials were examined. The results of the bacteriological analyses are shown in Tables I, II, and III. Of the sixty-nine impression compounds (Table I), nine (13%) were found to have anaerobes and one a coagulase-positive staphylococcus. Of the forty-eight impression plasters (Table II), nineteen (40%) were found to have anaerobes. Details of the anaerobic flora found in the con-

TABLE I

Results of the Bacteriological Analysis of Dental Impression Compounds

Manufacturer	Samples tested No.	Number with Anaerobes
1.	3	0
2.	1	1
3.	1	0
4.	4	0
5.	4	2
6.	2	0
7.	4	0
8.	4	1
9.	1	0
10.	1	0
11.	4	0
12.	11	1
13.	1	1
14.	5	0
15.	1	0
16.	2	0
17.	6	2
18.	3	0
19.	4	1
20.	1	0
21.	1	0
22.	1	0
23.	2	0
24.	1	0
25.	1	0
TOTAL	69	9 (13%)

TABLE II

Results of the Bacteriological Analysis of Dental Impression Plasters

Manufacturer	Samples tested No.	Number with Anaerobes
1.	2	1
4.	1	0
6.	1	0
12.	11	0
17.	19	13
26.	1	0
27.	1	1
28.	7	4
29.	5	0
TOTAL	48	19 (40%)

TABLE III

The Anaerobic Flora Found in the Contaminated Dental Impression Materials

Manufacturer	Number tested	Number with anaerobes	Anaerobic flora								
			Cl. welchii	Cl. histolyticum	Cl. cochlearium	Cl. sordelli	Cl. bifermentans	Cl. fallax	Cl. sporogones	Cl. novyi	Unidentified Cl.
*1	3	0	–	–	–	–	–	–	–	–	–
1 (a)	2	1	–	–	–	–	1	1	–	–	–
2	1	1	–	–	–	–	–	–	–	–	1
5	4	2	2	–	–	–	–	–	–	–	–
8	4	1	1	–	–	–	–	–	–	–	–
12	11	1	1	–	–	–	–	–	–	–	–
12 (a)	11	0	–	–	–	–	–	–	–	–	–
13	1	1	–	–	–	–	–	–	–	–	1
17	6	2	2	1	–	–	–	–	–	–	1
17 (a)	19	13	10	6	2	1	1	–	–	–	6
19	4	1	–	–	–	–	–	–	–	–	1
27	1	1	–	–	1	–	–	–	–	–	1
28 (a)	7	4	2	–	1	–	–	–	1	1	1
Total	74	28	18	7	4	1	2	1	1	1	12

* (a) signifies dental plasters. Where (a) is absent it signifies impression compounds.

taminated specimens are shown in Table III.

Discussion

It was mentioned previously that the significance of contamination in dental impression materials has not been established and that little attention has been paid to this particular feature. The actual part played by such contamination would be difficult to determine. It will be noted, however, in Table III that twelve (25%) of the plasters contaminated had pathogenic *Cl. welchii* organisms and six (12.5%) pathogenic *Cl. histolyticum*. The latter organism, which is known to be highly proteolytic to tissue, might play a very important role in delayed healing.

Summary

The results of the bacteriological analyses of one hundred and seventeen specimens of dental impression materials have been presented. Many of these specimens were found to contain pathogenic anaerobic bacteria and these facts are presented to the dental profession for evaluation of their significance.

Reference

(1) Greenberg, L. A Bacteriological Analysis of Plaster of Paris Bandages. In press.

ANNOUNCEMENT

Annual Seminar in California

The Sixth Annual Seminar for the Study and Practice of Dental Medicine at Palm Springs, California, will follow the American Dental Association Convention set for San Francisco October 17-21. The dates set for the Seminar, October 23-28, are conveniently arranged to enable those persons interested to attend both important gatherings.

Early arrangements should be made by contacting Miss Marion G. Lewis, Executive Secretary, 1618 Ninth Avenue, San Francisco 22, California.

Seven outstanding speakers will discuss and compare the most recent discoveries in dentistry and the related fields of medicine and biology. They include: Arthur C. Curtis, M.D., Professor and Director of the Department of Dermatology and Syphilology at the University of Michigan; Wilton Marion Krogman, Ph.B., M.A., Ph.D., Professor of Physical Anthropology, University of Pennsylvania; Seymour M. Farber, M.D., Assistant Clinical Professor of Medicine, University of California Medical School; Balint Orban, M.D., D.D.S., Professor at the University of Illinois; D. Harold Copp, M.D., who is collaborating with the Division of Dental Medicine at the University of California; Francis A. Arnold, Jr., B.S., D.D.S., Sr. Dental Surgeon, U.S.P.H.S.; and Paul Popenoe, Sc.D., Director of the American Institute of Family Relations in Los Angeles.

It has been pointed out repeatedly that national compulsory sickness insurance does not make more practitioners; it does not distribute them more equitably; and it does nothing to stimulate personal initiative. It does spread thinly services which become progressively poorer as time goes on. In other words, it is true that more people get something in the way of poorer services.—Marjorie Shearon, Ph.D, in F. Rev. of Chi. D. Soc., Feb. 1, 1949.

"All men have their frailties, and whoever looks for a friend without imperfection will never find what he seeks. We love ourselves notwithstanding our faults, and we ought to love our friends in like manner."—Cyrus.

The Therapeutic Properties of Periodontal Cement Packs

by W. J. LINGHORNE, D.D.S., Department of Physiology
and
D. C. O'CONNELL, M.S.A., Banting and Best Department of Medical Research,
University of Toronto

IN RECENT years periodontal cement packs have been increasingly used in the treatment of periodontal disease. Aided by a grant to Dr. H. K. Box, Research Professor of Periodontia, Faculty of Dentistry, University of Toronto, from the Associate Committee on Dental Research of the National Research Council, an investigation of the therapeutic properties of periodontal cement packs and their use in the treatment of periodontal disease has been conducted in the Banting and Best Department of Medical Research, University of Toronto. It is hoped that the additional knowledge obtained through this study will result in a more intelligent and effective clinical use of periodontal packs.

This paper primarily deals with the therapeutic properties of periodontal cement packs and does not discuss the relationship of this method of therapy to the various forms of periodontal disease. The application of the packing procedure to such conditions as necrotic gingivitis, necrotic and simplex periodontitis, is beyond the scope of this paper.

It has been considered preferable to present the pertinent experimental data rather than to attempt to describe any exact clinical techniques based on the results of the investigation, with the hope that the specific information will be helpful to the reader in evaluating and developing his own clinical procedures when using these materials. However, the three methods described in the *in vivo* studies were found to be adequate in meeting most of the packing problems encountered in periodontal case management. Both *in vivo* and *in vitro* studies were carried out. Only those experiments that may be of interest to the clinician are reported in this paper.

Periodontal cement packs consist of a powder and a liquid which are mixed together to form a paste. In the presence of moisture the paste sets, forming a fairly hard cement. Three formulae (see Appendix I) were selected as suitable for the various purposes and conditions encountered in periodontal case management. The products differed mainly in the physical character of the mix.

In Vitro Studies

The materials studied were: powders—zinc oxide, tannic acid, asbestos, resin; and liquids—eugenol, thymol, and sweet almond oil. The bacteriostatic properties of each were studied singly and in combination using the agar-plate-with-gutter technique as used in penicillin sensitivity tests.[1] (See Appendix II). The tests were carried out against staphylococcus aureus.

The following chart gives the result of the test of the various ingredients in the powders using water as the liquid and asbestos as a binder. The incubation period was 24 hours.

Compound	Zone of inhibition of growth in mm.
Asbestos + H_2O	0
Asbestos + Zinc Oxide + H_2O	1
Asbestos + Resin + H^2O	0
Asbestos + Tannic Acid + H_2O	5
Asbestos + Zinc Oxide + Tannic Acid + H_2	2

In testing the liquid, water of course was omitted but asbestos was again used as a binder. The following chart gives the results when eugenol alone was used as the liquid; incubation period 24 hours.

Compound	Zone of inhibition of growth in mm.
Asbestos and Eugenol	14
Asbestos + Zinc Oxide + Eugenol	8
Asbestos + Zinc Oxide + Resin + Eugenol	21
Asbestos + Zinc Oxide + Tannic Acid + Eugenol	12
Asbestos + Zinc Oxide + Tannic Acid + Resin + Eugenol	13

The next chart gives results using eugenol 75 parts and sweet almond oil 25 parts as the liquid; incubation period 24 hours.

Compound	Zone of inhibition of growth in mm.
Asbestos + Liquid	14
Asbestos + Zinc Oxide + Liquid	21
Asbestos + Zinc Oxide + Resin + Liquid	24
Asbestos + Zinc Oxide + Tannic Acid + Liquid	10
Asbestos + Zinc Oxide + Tannic Acid + Resin + Liquid	12

Asbestos + Sweet Almond Oil gave an inhibition of 5 mm.

The next chart gives the results when eugenol and thymol (98 parts eugenol and 2 parts thymol) were mixed as the liquid; incubation period 24 hours.

Compound	Zone of inhibition of growth in mm
Asbestos + liquid	22
Asbestos + Zinc Oxide + liquid	27
Asbestos + Zinc oxide + Resin + liquid	25
Asbestos + Zinc oxide + Resin + Tannic acid + liquid	12

In all the plates showing inhibition there seemed to be two processes going on at the same time, namely the diffusion of the bacteriostatic agent through the agar and the growth of the organisms. Thus the question arose whether the organisms which had grown before the bacteriostatic agent had diffused in the area and then, upon further diffusion, may have been subsequently killed. Accordingly, after two days at room temperature following the initial 24 hours incubation at 37° C, five plates and one control were re-inoculated with staphylococcus aureus and re-incubated. No growth occurred in any portion of any plate except the control plate. Evidently diffusion had continued throughout the whole plate.

In order to ascertain for what length of time the active agent continued to diffuse from the pack, and whether the setting interfered with the bacteriostatic action, the following studies were carried out.

Five grams of pack with eugenol and sweet almond oil and the same amount with eugenol and thymol were placed on swab sticks, (see Appendix IV), and dropped into 5 c.c. of beef extract broth.

After one-half hour in the first tube the pack had set and was transferred from tube to tube at intervals.

Tube 1	½ hour
" 2	½ "
" 3	1 "
" 4	1 "
" 5	24 "

All tubes were then seeded with staphylococcus aureus and incubated at 37 C° for 24 and 28 hours. No growth occurred in any culture tube.

The next question was whether the result obtained was due to an agent on the surface or to actual diffusion from the core of the pack. Therefore in the next test, after the pack had been allowed to harden in the first tube for ½ hour, it was carried through a series of six washes in one hour, ten minutes in each tube and then carried through two ½ hour tubes, two 1 hour tubes and one 24 hour tube. No growth appeared in any tube after 24 hours incubation. On 72 hours incubation, only the last four of the six wash tubes showed evidence of growth. It appears, then, that time for diffusion is necessary since a 10 minute interval is not always sufficient time to ensure a bacteriostatic concentration.

To determine whether the staphylococcus aureus had been killed or its growth inhibited only, four tubes of fresh sterile broth were seeded from

one of the half hour tubes in the diffusion series and incubated at 37° C for 48 hours. No growth occurred in any tube indicating that the organisms had been killed.

The next study was carried out to determine how long the pack would continue to diffuse the active agent. It was carried out in duplicate according to the method described above, with the swab stick.

The pack was placed in broth and incubated for 24 hours, then removed and placed in the next broth tube and incubated for 1 hour. Following this, it was transferred to another tube and incubated for another 24 hours. The procedure was continued each day. Day by day the tubes from which the pack had been removed were seeded with staphylococcus organisms and incubated for 24 hours. Up to the 35th day, no growth occurred in either the 1 hour or the 24 hour tubes. This same pack in broth was set aside in the laboratory for one year, during which time the broth had evaporated to dryness. When the pack was placed in broth for 1 hour, once again sufficient of the bacteriostatic agent had diffused from the pack to prevent the growth of staphylococcus aureus.

The following studies were made of the bacteriostatic effect of the pack against other organisms. Using the agar-plate-with-well technique (see Appendix III) the effect of the pack against pseudomonas aeruginosa, micrococcus catarrhalis, staphylococcus aureus, streptococcus viridans and streptococcus hemolyticus, was determined.

In addition, a comparison of the bacteriostatic effect of the pack with that of pack + sulphathiazole and pack + penicillin was made.

The following chart gives the results of the testing of the pack alone, pack + sulphathiazole and pack + penicillin.

Test materials:

(1) pack
(2) pack + 5% sulphathiazole powder
(3) pack + penicillin (5000 units in 5 grams of pack)

Test Organisms	Zone of Inhibition		
	Pack	Pack + sulphathiazole	Pack + penicillin
Micrococcus catarrhalis	7, 7,	10, 9,	7, 8,
Streptococcus viridans	10, 10,	10, 10,	
Streptococcus hemolyticus	7, 7,	7, 8,	11, 10, 10, 11,
Staphylococcus aureus	16, 17,	8, 10,	16, 14,
Psuedomonas aeruginosa	2, 1,	1, 2,	1, 2,

In addition to the tests carried out against the above pathogenic bacteria, a similar test was made against candida albicans, the micro-organism concerned in thrush. The zone of inhibition produced against C. albicans was 20 mm, indicating that the pack has considerable fungicidal properties.

In Vivo Studies

Studies were carried out to investigate the effect of packing periodontal pockets in humans and dogs.

Procedure

Material taken from the depths of the periodontal pockets was placed on slides, care being taken to prevent maceration of the organisms and it was allowed to dry in air. After drying, the smears were examined under oil, at least 30 fields being considered in thin preparation.

Three methods for removing the material from the pocket were investigated: (1) using a suitably shaped wooden toothpick, (2) a metal probe and (3) a capillary tube pipette. The first was the method selected and used throughout these experiments. In each case the pocket area was isolated with cotton rolls, excess moisture removed by blast of air, the toothpick was suitably shaped and lightly scraped along the base of the pocket.

For practical purposes the microscopic findings were divided into three groupings. Those smears in which no

organisms of the fuso-spirochetal group were found were called clinically sterile; those showing one or two organisms per field were called almost clinically sterile; and those smears showing any of the group organisms in fair numbers were called clinically septic. (See photomicrograph 1, 2, and 3.) Smears were taken before packing, after the pack had been in place for various lengths of time and after the pocket had been packed several times. Only those series considered to have a bearing on clinical procedure are reported in this paper.

Pockets from 4 to 8 mm. in depth as determined by means of a probe graduated in millimetres, were selected. A number of techniques for applying the pack were tried. Three were selected and used according to the depth and course of the pocket and the nature of the soft tissue wall.

Method I

Where it was possible to retract the soft tissue wall to the base, Method I was used. A mix of Formula 3 (See Appendix I) was made about the consistency of putty and was introduced, a portion at a time, gradually overfilling the pocket. Each portion of pack was sealed to the tooth and to the pack already inserted, avoiding direct pressure on the soft tissues. Finger pressure was used to mould the overfilled portion to the tooth and to seal the pocket. Only half of the mouth was packed at one time and the patient was requested to avoid chewing food where the teeth were packed. The pack was removed in 24-48 hours, at which time the pocket wall was often retracted to the base. Where considered necessary the pocket was repacked, this operation being greatly facilitated by the opening up of the pocket by the preceding pack. The pack was again removed in 24 or 48 hours. In a limited number of cases the pack was allowed to remain in place for 4 to 7 days.

Method II

Where the pocket was narrow, tortuous, deep (over 6 mm.) or where the soft tissue was dense and fibrous, Method II was used. A thin creamy mix of Formula I was made into which shreds of absorbent cotton were mixed. Then, with a suitable instrument, this saturated cotton was introduced into the pocket and very

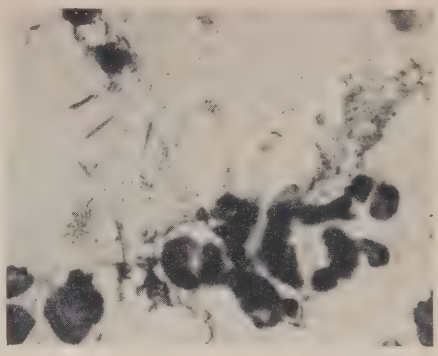

FIG. 1. Septic

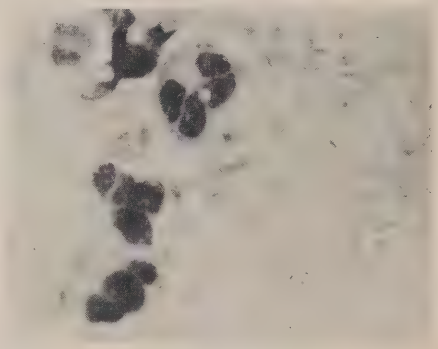

FIG. 2. Almost Sterile

FIG. 3. Sterile

lightly tamped until the pocket was three quarters filled. The pocket was then overfilled with a stiffer mix of formula III which was moulded around the tooth using finger pressure to seal the pocket.

Method III

Where it was possible to flow the pack into place using finger pressure and instruments, a mix of Formula II, which would flow under finger pressure, was used.

The purpose in packing was to bring the active agent in the pack into close contact with the bacteria at the base of the pocket. Box, in his paper "Necrotic Gingivitis"[2] pointed out that taking into account the questions of extreme pocket thinness, viscosity of the pocket fluids and the presence of calcific deposits which serve to interfere with great mass movements through constrictions etc., it would appear that convection currents have little bearing on the oxygen distribution in the pocket. Constrictions would slow the rate of penetration of the pocket by diffusion also. Thus in order to permit the diffusion throughout the pocket of the active agent in the pack, either the soft tissue wall must be retracted to the base, or the pocket must be filled to the base with the pack.

The following table gives the results of packing periodontal pockets in humans. Only those cases where the pack remained firmly in place were included. All pockets were found to be clinically septic before packing.

No. of pockets	No. of times packed	Time pack in place	Clinically sterile	Almost Sterile	Septic
91	1	24 hrs	64%	14%	22%
42	2	48 hrs	82.5	15	2.5
19	1	4 to 7 days	26	23	47
13	2 or more	4 to 7 days	77	23	0

Leaving the pack in place longer than 24 hours at a time made little difference. When the pack was left longer than 48 hours it was often loosened or displaced.

The following table gives the results of packing experimentally produced periodontal pockets in dogs using Method II.

No. of pockets	No. of times packed	Time pack in place	Clinically sterile	Almost sterile	Septic
24	1	24 hours	100%	0%	0%

All pockets were clinically septic before packing.

Discussion

The *in vivo* studies indicated that the cement packs selected are highly effective in combatting the organisms of the periodontal pocket. The *in vitro* studies show that the pack is bacteriostatic against a number of known pathogenic organisms and that under certain conditions this effect is maintained for a far longer time than is required clinically in pocket therapy. Thus the pocket can be kept clinically sterile for at least a week if desired in treatment.

However, as pointed out before in this paper, in order that the active agent be brought into contact with all the organisms in sufficient concentration for the required time, it appears necessary that either the pocket be packed in such a way that the soft tissue wall is retracted to the base, or that the pocket be filled to the base with the pack. Thus, in the dogs, where conditions were such that the pockets could be packed to the base, all were found to be clinically sterile in 24 hours. Also, in human periodontal pockets a much higher percentage was found to be clinically sterile following second packing than when only one pack was used. This is to be expected as the opening up of the pocket by the first pack greatly facilitated the second packing.

In order to meet the various requirements in management of periodontal cases, three formulae, varying mainly in the physical characteristics of the

mix, are suggested. The mix of Formula I is thick and creamy and might be described as a paint. It is sticky and adheres well to the teeth and mucous membrane. The mix of Formula II is stiffer and more fibrous but will flow under finger pressure. It is less sticky than that of Formula I. The mix of Formula III might be compared to the consistency of putty. When applied it will displace the tissues and hold them displaced until setting of the pack occurs. It is not sticky but can be made to adhere to the tooth and to other portions of pack. When set it is softer and less brittle than the mix of either of the other two formulae.

The bacteriostatic effect of the pack appears to be largely due to the eugenol and thymol. The addition of thymol seems to increase the bacteriostatic effect. Sweet almond oil slows the setting time and reduces stickiness. It is omitted in Formula I and II as stickiness and quick setting are desirable properties when used by the technique described.

Besides being bacteriostatic, both eugenol and thymol are stimulants and local analgesics. When the pack is applied to tender or painful surfaces, the patient experiences almost immediate relief, also, there is a marked beneficial effect on the tissues observed clinically within 24 hours of the application of the pack.

The pack is fairly insoluble in water but dissolves readily in alcohol. This fact is made use of when cleaning mixing slabs or instruments.

The addition of 5% sulphathiazole or penicillin (5000 units to 5 grams of pack) does not appear to enhance the bacteriostatic effects of the pack against the test organisms.

The *in vitro* test against candida albicans, the fungus concerned in thrush, suggests that the pack is an effective fungicide.

Suggestions for use Clinically

(1) In pocket therapy.
(2) In the treatment of coronitis.
(3) Pre-operative to the extraction of periodontally affected teeth.
(4) Pre-operative and post-operative to gingivectomy.
(5) On infected surfaces in the mouth.

Conclusions

(1) *In vitro* studies indicate that the periodontal packing material studied is an effective bacteriostatic agent against staphylococcus aureus, streptococcus viridans, streptococcus hemolyticus, micrococcus catarrhalis.
(2) *In vivo* studies indicate that the pack is an effective agent in pocket therapy.
(3) Diffusion of the bacteriostatic agent from the pack into the surrounding media will continue for a far longer time than is required in periodontal case management.
(4) The periodontal pack acts as a stimulant and a local analgesic.
(5) The addition of 5% sulphathiazole or of penicillin (5000 units to 5 grams of pack) does not seem to increase the bacteriostatic effectiveness of the pack.
(6) The pack is an effective fungicide against candida albicans, the organism concerned in thrush.

Appendix I

Formula I

Zinc Oxide Wt. per 100 gms.	39.2 mgs.
Powdered Resin	49.5
Tannic Acid	7.9
Kayolone (Hydrated Aluminium Silicate)	3.4

Liquid

Eugenol	98 parts
Thymol (crystal, readily soluble in eugenol)	2

Formula II

Zinc oxide Wt. per 100 gms.	36.9
Powdered Resin	46.5
Tannic Acid	7.4
Kayolone	3.3
Asbestos	5.9

Liquid

Eugenol	98 parts
Thymol	2

FORMULA III

Powdered Resin	38.5 gms.
Tannic Acid	5.0
Zinc Oxide	38.5
Asbestos	18.0
Liquid	
Eugenol	75 parts
Sweet Almond Oil	25

APPENDIX II

Agar-plate-with-gutter technique for the determination of inhibition produced by cement or paste-like materials against bacteria.

This technique consists of cutting a narrow trough or gutter through the centre of a poured agar plate and then filling this cut with the material being tested.

The test organisms are then streaked up to, but not across the edge of the gutter. After inoculation the plates are incubated at 37° C for 24 to 48 hours.

The inhibition produced is the distance in millimetres measured from the edge of the trough out to the first pin point colonies growing along the line of inoculation. Beyond the zone of inhibition the test organism should grow well and by so doing provides a control for the test.

By making only narrow streaks quite close together, one organism may be streaked several times on one plate or several organisms may be streaked on the same plate, thereby giving duplication or comparison.

APPENDIX III

Agar-plate-with-well technique for the determination of inhibition produced by cement or paste-like materials against a single organism[3].

This technique consists of cutting a well in the centre of a poured agar plate which has been previously inoculated with the test organism and then filling the well with the material being tested.

Immediately after filling the well, the plate is incubated at 37° C for 24 to 48 hours. The inhibition produced is the width of the annulus obtained, measured in millimetres (distance from edge of well to bacterial growth just beyond zone of no growth). Beyond the zone of inhibition, the test organism should grow well and thereby provide a control for the test.

Only one organism at a time may be tested by this technique and duplication requires the use of other plates.

APPENDIX IV

Swab stick technique for the determination of the effects of setting and time for diffusion on the bacteriostatic action of cement pack.

This technique consists of making up a batch of pack (5 gms.) and placing it around the end of a medium sized swab stick, and then placing it in a culture tube containing 5 c.c. of a suitable liquid culture medium.

The pack will harden in about one hour in liquid and will continue to diffuse the active ingredient for considerable lengths of time. Once the pack has hardened on the stick it may be transferred from tube to tube as required, making it possible to study rates of diffusion of the active agent from the pack into the surrounding culture medium.

After removal of swab stick with pack, the tubed and treated medium may be inoculated with test organisms and incubated.

REFERENCES

(1) Fleming, A. 1929. Brit. J. Exp. Path. 10 —226.

(2) Box, Harold Keith. D.D.S. Ph.D. Necrotic Gingivitis, University of Toronto Press. 1930.

(3) Zinsser, H. and Bayne-Jones, S. Textbook of Bacteriology, Chapter LXXIII. 8th ed. 1939.

FOOTNOTE

This work was initiated as a result of the conception of the pathogenesis of periodontal disease recently presented by Dr. H. K. Box, in which the importance of pocket therapy, even in the early stages of periodontal disease, is emphasized. The authors owe a debt of gratitude to Dr. Box for valuable information on this problem as it relates to periodontal disease.

The authors also wish to acknowledge their indebtedness to Dr. C. H. Best and to Dr. C. C. Lucas for helpful suggestions and advice on certain phases of the problem.

ANNOUNCEMENTS

Program of the Convention

of The Canadian Dental Association in Co-operation with the Western Canada Dental Society in Bessborough Hotel, Saskatoon

SUNDAY, JUNE 5, 1949

P.M.	2.00	Registration
	8.30	Reception and Registration

MONDAY, JUNE 6,

A.M.	8.00- 9.00	Registration
	9.00-10.00	Opening Exercises
	10.00-11.15	Essayist—Ball Room—Dr. W. J. Pryor, Cleveland, Ohio, Prosthodontia
	11.15-12.00	Exhibits—Pictures—Salons 1 - 6
	12.00- 1.45	Luncheon—Speaker
P.M.	2.00- 3.15	Group Clinicians—Pictures—Salons 1 - 6
	3.30- 4.45	Group Clinicians—Pictures—Salons 1 - 6
	5.00- 6.00	Exhibits
	5.00- 6.00	House of Delegates
	6.15- 7.45	Dinner
	8.00- 9.00	Essayist—Ball Room—Dr. J. C. Brauer, Pedodontist—School of Dentistry, University of Washington, Seattle. "The Children in Your Practice".
	9.00-10.00	Group Clinicians—Pictures—Salons 1 - 6

TUESDAY, JUNE 7,

A.M.	9.00-10.15	Essayist—Ball Room—Dr. P. G. Anderson, School of Dentistry, University of Toronto. "Operative Procedures".
	10.30-11.45	Essayist—Ball Room—Dr. W. J. Pryor, Cleveland —Prosthodontia.
	12.00- 1.45	Luncheon—Speaker
P.M.	2.00- 3.15	Essayist—Ball Room—Dr. J. C. Brauer, Seattle—"Everyday Preventive Dentistry".
	3.30- 4.30	Group Clinicians—Salons 1 - 6
	4.30- 6.00	Exhibits—Pictures—Salons 1 - 6
	6.30-	President's Dinner—Dance.

WEDNESDAY, JUNE 8,

A.M.	9.00-10.15	Essayist—Ball Room—Dr. P. G. Anderson, Toronto—"Fixed Bridge Restorations".
	10.30-11.30	Group Clinicians—Salons 1 - 6
	12.00- 2.15	Luncheon—C.D.A. Annual Meeting—President's Address—Installation of Officers—Open Session—Presentation of Golf Awards.

GROUP CLINICIANS:

1. Dr. W. A. Quigley —Faculty of Dentistry, University of Alberta, Edmonton—"Correction of Anterior Cross Bites in General Practice".
2. Dr. W. G. McIntosh —Faculty of Dentistry, University of Toronto—"Periodontal Infections".
3. Dr. H. R. MacLean —Faculty of Dentistry, University of Alberta, Edmonton—"Operative Dentistry".
4. Dr. J. Passalis —Oral Surgeon, Winnipeg, Manitoba—"Principles of X-Ray Technique and Diagnosis as related to the Oral Field".
5. Final Arrangements Pending.

GOLF: There are numerous events and prizes, so come fully prepared. All competitions qualifying for prizes must be completed by 12 noon, Wednesday.

All arrangements are under the Chairmanship of Dr. F. Smith, 606 Canada Building, Saskatoon, Saskatchewan.

(Continued on next page)

LADIES' PROGRAM

CANADIAN DENTAL ASSOCIATION—JUNE 1 - 5

GENERAL CONVENER.....Mrs. R. R. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
SOCIAL CONVENERS.....Mrs. R. V. Little & Mrs. F. G. Salisbury

THURSDAY, JUNE 2nd—Afternoon at the home of Mrs. F. G. Salisbury—(Assemble in Ladies' Lounge, Main Floor).

FRIDAY, JUNE 3rd—2:00 P.M. MOTOR TOUR OF CITY—(Assemble in Ladies' Lounge, Main Floor). Buffet Supper at home of Mrs. L. D. Haselton.

SATURDAY, JUNE 4th—After 9:00 P.M.—COFFEE PARTY.

SUNDAY, JUNE 5th—PICNIC AT FORESTRY FARM.

GOLF BY REQUEST ANY DAY.

LADIES' PROGRAM

WESTERN CANADA DENTAL SOCIETY—JUNE 5 - 8

GENERAL CONVENER.....Mrs. R. L. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
REGISTRATION CONVENER.....Mrs. M. J. MacDonell
SOCIAL CONVENERS.....Mrs. L. D. Haselton & Mrs. N. F. Gropper

SUNDAY, JUNE 5th—Reception and Registration.

MONDAY, JUNE 6th—Afternoon Tea at home of Mrs. E. B. Nagle—(Assemble in Ladies' Lounge—Bessborough Hotel).

TUESDAY, JUNE 7th—MOTOR TOUR BY REQUEST.
Luncheon at 1:30 P.M. at Saskatoon Golf and Country Club. (Assemble in Ladies' Lounge—Bessborough Hotel).
7:00 P.M. BANQUET AND DANCE.

WEDNESDAY, JUNE 8th—11:15 A.M. LUNCH AT BESSBOROUGH HOTEL.

GOLF BY REQUEST ANY DAY.

Convention of Western Canada Dental Nurses and Assistants

This convention will be held in Saskatoon, June 5-8 in conjunction with the convention of the Western Canada Dental Society. The following is an outline of the program:

SUNDAY, JUNE 5		
2:00 p.m.	7:00 p.m.	Registration
8:30 p.m.		Reception
MONDAY, JUNE 6		
9:00 a.m.	10:00 a.m.	Welcoming Addresses
10:00 a.m.	11:30 a.m.	Business Meeting of the Western Canada Dental Nurses and Dental Assistants.
12:00 a.m.	1:45 p.m.	ASH-TEMPLE CO. Luncheon & Speaker
2:00 p.m.	3:15 p.m.	Clinician
3:30 p.m.	4:45 p.m.	Essayist
5:00 p.m.	6:00 p.m.	Exhibits & Pictures
9:00 p.m.	————	Saskatoon Dental Assistants' "At Home"
TUESDAY, JUNE 7		
9:00 a.m.	10:15 a.m.	Essayist
10:30 a.m.	11:45 a.m.	Business Meeting
12:00 a.m.	1:45 p.m.	DENCO (WESTERN) Ltd. Luncheon & Speaker
2:00 p.m.	3:15 p.m.	Essayist
3:30 p.m.	4:30 p.m.	Clinician
6:30 p.m.	————	BANQUET & DANCE

(Continued on next page)

WEDNESDAY, June 8
9:30 a.m. ———— BREAKFAST PARTY
2:00 p.m. 3:15 p.m. Essayist

Enquiries and communications regarding the Convention should be addressed to: Mrs. Thelma Gourlay, Secretary of the Saskatoon Dental Assistants' Society, c/o Dr. F. R. Smith, 606 Canada Building, Saskatoon, Sask.

For reservations please write Miss Ruth Walrod care of Dr. Dickson, 410 Canada Building, Saskatoon.

REDUCED FARES FOR RAIL TRAVEL TO THE ANNUAL MEETING
(Please See Announcement on Page 223)

Meeting of Board of Governors of C.D.A.

The C.D.A. Governors will meet at the Bessborough Hotel in Saskatoon commencing Thursday, June 2, at 1:30 p.m.

Ontario Dental Association Convention .

The eighty-second Convention of this Association will be held at the Royal York Hotel, Toronto. The Convention commences May 15 with a Reception and Musicale. The Program for May 16, 17 and 18 includes Group Clinics, Table Clinics, Essays, Visual Education, and the Exhibitors' latest displays.

For further information contact the Secretary, 86 Bloor Street West, Toronto 5, Ontario.

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at The Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver anniversary of the inauguration of this annual event.

Alpha Omega Fraternity

The closing meeting of this Society will be a dinner meeting to be held on May 16 in the library of the Royal York Hotel Toronto.

S. SPIVAK, D.D.S.

First Maritime Convention

The Convention will be held at the Algonquin Hotel, St. Andrews-By-The-Sea, New Brunswick, August 31 and September 1 and 2.

Canadian Dietetic Association

This Association is holding its Annual Convention on June 15 to 17 at the Fort Garry Hotel, Winnipeg, Manitoba.

A Program has been planned which will include Group Conferences, pertaining to the many phases of food work, interesting exhibits of food and equipment, and papers by outstanding guest speakers and members of the Canadian Dietetic Association.

The People's Health

The Canadian Institute of International Affairs will publish shortly a *Behind the Headlines* pamphlet entitled "The People's Health—Canada and WHO."

"The People's Health" divided into two sections will discuss firstly Canada's new health program and secondly the origin, aims and achievements of WHO. The authors are C. Fred Bodsworth, well-known Canadian journalist and Dr. Brock Chisholm, Director of WHO.

The Canadian Institute of International Affairs is a non-political, non-profit organization devoted to increasing knowledge of, and interest in international affairs in Canada.

The Forum

FLUORINE FOR YOUR THREE-YEAR-OLDS

by WALTER C. McBRIDE

Condensed from Editorial in Jour. of Michigan State Dental Soc., January, 1949

How are you getting along with the application of fluorine to your three-year-old patients? If your answer bears affirmative accord the writer will journey to your abode so he can see in the flesh an individual in a good state of mental health and possessing such phenomenal talent and ability.

I'm sincerely interested in this current question because since the proclamation of fluorine last spring I'm expected, by the laity, to apply it to the teeth of all young children, the younger the better, and I'm suspected, by the fluorine gentry, of being antagonistic to the laws of good dental health if I don't.

And who am I to ask such brazen questions? Just a children's dentist—with sufficient experience to recognize there are limitations to what one can do for the real young—amicably and well. If one must scrap verbally or physically with the child, the procedure is difficult for both the operator and the parent who must return the patient for the remaining treatments. Besides, if one cannot do it well then there is little value in doing it at all. The physician treats Vincent's by swabbing the oral cavity with some one of the antiseptics but his treatment is valueless because he fails to properly place the medication under the gingival flap in a dry field. Similarly a dentist may apply fluorine to young children's teeth but if the fluorine becomes entangled with the saliva, because of the inability to keep the field dry, or is absorbed by the tongue-motivated cotton roll in its periodic excursions across the surfaces of the tooth, then the treatment likewise is valueless.

A critic has raised the issue that if one can manage a three-year-old for operative work and fillings he assuredly should be able to do so for fluorine applications. On the surface it appears he may have a point, but actually, as I have observed in the three-year-old children for whom I have placed restorations, there is quite a difference. During the preparation of the cavity there is periodic relief, every twenty or thirty seconds, for expectoration and for the customary respite. In fluorine application the three minutes of being harnessed up seems an interminable time. This apparent frustration, I find, is equally as annoying to the very young as the infliction of pain. Further, in placing a filling the top of the cotton roll may be flush with the occlusal surface of the tooth. In fluorine application, to the contrary, the top of the roll must be well below the gingival surface, and with the shallow oral floor of the three-year-old child, there is definitely an unpleasant or painful pressure on the tissue.

A few years back, to further pursue my point, a group of public health men and others, gathered at Ann Arbor to study the dental needs of children. What was the goading force I'm not prepared to say but in their search for the proper age for the infant's first dental appointment they stopped at two and one-half years. Then came Detroit's first Child Dental Health Day, February, 1948, and out of a dis-

tant port came an essayist who, in an hour's presentation, informed us in detail just how to do prophylaxis for an eighteen-month-old infant — the ideal time, he inferred, to begin the child's dental visits. With these two magnificent pronouncements and with consideration for what they may entail in future thinking I'm certain I want to live only a little longer.

I believe in the fluorine theory, because I think the experimentations were scientific and above reproach, but let you and I, as practising dentists, be practical so far as its application is concerned. Let's wait until the child is sufficiently old to be cooperative so it can be done comfortably, with regard to both child and dentist. I'm not all afraid to stick my neck out, to use the vernacular, and state that I'm currently beginning fluorine applications on children five years of age. Even so, at this age, a number complain before the treatment period is over. Further, all children who have had the four fluorine treatments are being given an added application every six months as they return for the periodic prophylaxis and examination. This procedure —instead of the prescribed repeated four applications every three years— is definitely more attractive, from the viewpoint of both parent and dentist. First, investigators have disclosed that the first of the four applications provides 25% of the 40% immunization common to the series of four. If this be true then a twice yearly application—six applications in a three year period—would provide a much greater protection than four treatments every three years, while adding the additional and attractive feature of giving protection to every new tooth immediately upon eruption or shortly thereafter. Secondly, this would be attractive to the parent in that it would eliminate the four additional visits at the end of each three year period. Lastly, and speaking economically, the six periodic applications, given at each prophylaxis period over the three years, at a slightly increased recall fee, would be attractive to the dentists, and what is equally as important, prove less costly to the parent than the prescribed four special visits every three years.

Habitually I do not criticize and so brazenly prescribe. But this matter has a great bearing on my particular field of endeavour. I repeat, I'm a children's dentist, vitally interested in any dental procedure for the kids, admittedly unscientific in spots, yet with sufficient experience in handling children to recognize there are limitations to what one can do dentally — amicably and well—for the real young.

THE MANAGEMENT OF THE CHILD PATIENT IN THE DENTAL OFFICE

by CLAUDE W. BIERMAN, D.D.S., Minneapolis, Minnesota

From F. Review of Chicago D. Soc., Dec. 1, 1948

In defense of the child patient, I want to say that only a small percentage of children are really difficult to handle and these children lack training. We find parents telling in front of the child how difficult the child is to manage, and we also have those children who have been painfully treated in some dental office. So let us not place all the blame upon the child.

The first step in the management of children is to prepare some corner of your office to appeal to children. Give it a friendly atmosphere to show each child that you are actually interested in them as well as in the adult patient. Teach the office personnel to greet each child with a pleasant "hello" and with a smile. This entire set-up might well be termed "environmental phychology." It means so much, and yet is so often neglected.

Pleasant surroundings and pleasing personalities build for better understanding to both children and adults when in a dental office. They are the first steps in allaying dental fears for the child.

Our next step is to see the child for his or her first appointment in the morning when the child and office personnel are rested and ready for a "battle" if necessary. We try to make this first visit both interesting and pleasant for the little patient, and we study the child's reactions while having the teeth polished, during which time my hygienist gives a very interesting talk to both the child and the parent on the care of the teeth at home. She teaches the proper home brushing technique and the value of staining the teeth with 2 per cent mercurochrome solution and the use of cotton rolls. We firmly believe that children will brush their teeth if they can see what they are trying to remove from the teeth. This is their first lesson and their response is gratifying.

In most cases we advise the parent of the necessity of our seeing each child once every three months to have the teeth polished and examined. If any dentistry is needed, it is done at another appointment unless the child is in pain.

To do any restorative fillings for a child, or to dismiss any patient without bitewing radiographs is unfair to yourself, the patient and the parent. It is our simplest means of knowing what decay there is in the mouth and the depth of each decayed area. Every film tells a story that should be included in our mouth history chart.

There are two "don'ts" that must be observed at the first appointment for any child. First, do not rush the child from the reception room to the operating room; and second, do not push too much dentistry at the child during the first visit. Let the child become acquainted and he will react kindly toward future appointments.

The second appointment should also be in the morning if any amount of dentistry is to be done. Have these little patients excused from school and reserve later appointments in the day for the older and well behaved patients. I have very little trouble in securing this cooperation from the parents, as they can readily see the common sense of my suggested early appointments.

Length of Appointments

When the parents cooperate with you in getting the child excused from school, then you must do as much dentistry as possible for the child at each visit. A long time ago I learned that fifteen minute appointments were unprofitable for me, and I was unable to accomplish the desired amount of dentistry.

My average time for any child who has several cavities is an hour to an hour and a half for each visit. I find that I can accomplish much more dentistry for each child with a decided income increase to myself. Also the parents appreciate the fewer appointments, as their time is also valuable in this very busy world in which we live today.

Probably you will think that the above length of appointments is fatiguing to the child, but the reverse is always in evidence. Believe me, the child and the parent are just as anxious as the operator to complete each case.

In doing dentistry for children we must remember to open cavities with small burs. I call them brushes, either a 33½ inverted, or a 700 tapering cross cut burr. Light pressure is used, being careful to avoid the generation of heat or burning of the tooth. This procedure will avoid much pain. Use chisels and a tapering diamond stone to break down undermined enamel. It is surprising how rapidly this procedure cuts into the tooth. Small brushes to start with and then larger ones to finish the cavity preparation will be more comfortable for the child.

In restoring a two-surface cavity with an inlay, I use the indirect method; but with alloy I construct an individual matrix for each tooth to be filled. The material used for the matrix is .002 brass shim. This may be purchased from any brass company and for 25 cents you will receive enough for many restorations. This

brass shim is so thin that you never have to think of the contact when the band is removed several hours later. The technique of making these bands is so simple that I cannot understand why they are not more universally used for permanent as well as deciduous restorations. If made correctly, the finished filling will have perfect margins and ideal contact.

In my office, I find it quite unsatisfactory to do good dentistry without later giving the mouth regular supervision. This I accomplish through the aid of my recall chart. This allows each child to be recalled to my office every three months for a prophylaxis and examination, thus we have some degree of control over each child's mouth.

Handling of Children

In speaking on the handling of children in a dental office, I am invariably asked this question: "What do you do with the parent?" Well, I invite the parent into the operating room, and the more obstreperous the child, the more important it is for the parent to be present. The obstreperous child causes more concern than all the other patients. It requires a great deal of psychology, patience, temper control, firmness and kindness on our part to cope with this type of patient. Often they are mean and ill mannered showing no respect for the parent and, of course, less for the operator. They resent being in the office and have learned many tricks to discourage any dental services from being performed. They generally kick, throw their arms and twist in the chair besides yelling at the top of their lungs. They are not in tears, but they are downright mad at the world, especially at those present. They have refused to walk into the operating room and have had to be carried in while screaming and kicking.

I talk to such a child in a natural tone of voice and try to reason with him, but when that is of no avail, I ask the parent to come in front of the chair and hold his legs, my assistant holds his arms and I hold his head in position. If he continues to yell, he usually has his mouth open and, believe me, I "go to town" on the operative work to be done. I keep talking to the child in a quiet tone, but at the same time I am firm with him. Soon he realizes that he cannot battle the three grown people who are holding him and he does quiet down for dental treatment. We have won the first round, and have accomplished some dentistry plus the breaking of his uncontrolled temper. Some dentistry must be completed at the first visit and at each subsequent visit.

When the obstreperous child realizes that you are going to complete what you have set out to do, even if it takes all morning, he soon gives in and becomes a cooperative patient. Some of my finest patients today were "outlaws" at their first appointment.

Children have many tricks, such as gagging, coughing or vomiting, and they will use them if they see it irritates the operator. These cases are rare, but when they do present themselves, they must be handled properly to accomplish the desired result. I believe that every child can be won over to receive dentistry and to become a cooperative patient.

I hope that no one in this audience has the attitude of a friend of mine who told me at lunch the other day that he was so busy he "didn't have time to fool around with children." I replied that probably he didn't have time to "fool around" with children, but he certainly did have time to do good dentistry for children if he accepted children as patients. Our efforts to do good dentistry for every patient do not exclude children.

In closing I want to state that each of you can really get enjoyment out of your child patients and your enjoyment will be greater if you spend some time equipping yourself to give a better service to each patient. Do not be afraid to accept children as patients, give good service to each child and ask a compensating fee for this service.

THE PRESERVATION OF THE YOUNG TOOTH BY THE VITAL PULPOTOMY TECHNIQUE

by GEORGE W. TEUSCHER, CHICAGO, ILLINOIS

Condensed from Minneapolis Dist. D. Jour., June 1948

Clinical dentistry needs a procedure whereby the vitality of children's teeth can be maintained when the pulp has been exposed by caries or accident. This need is particularly felt when the roots of such teeth have not attained physiological completion; the root ends appear to be funnel-shaped.

Teuscher and Zander reported on 120 cases of pulpotomy in 1938. The cases were mostly first permanent molars and upper permanent central and lateral incisor teeth in which the pulps had been exposed by caries or by accident such as by falls, blows, etc. After anaesthetizing the tooth with procaine hydrochloride, the following procedure was employed: Surgical asepsis was obtained by applying the rubber dam and washing the field of operation with alcohol. The sterility of the instruments was maintained during the operation by dipping them in alcohol and passing them through a flame. The instruments consisted of a set of spoons and chisels, and fissure burs for straight and contra-angle handpieces. It is absolutely essential to have access to the entire pulp chamber. After the outline form was obtained, all caries was removed. This was done by starting at the dento-enamel junction and avoiding exposure before all other caries had been removed. With a sharp fissure bur the entire roof of the pulp chamber was cut away.

The bulbous portion of the pulp was cut off flush with the floor of the pulp in the chamber. Haemorrhage was stopped by using a hot aqueous solution of calcium hydroxide ($Ca(OH)_2$). This was carefully removed with sterile cotton pellets. A thick $Ca(OH)_2$ paste was placed in the pulp chamber, cotton pellets being used to carry it to place. A thin layer of paraffin was luted to place over the preparation and covered with a cement base. The amalgam filling was placed immediately. One should be careful not to bear against the cut ends of the pulp. By excessive pressure was meant any pressure much beyond the weight of the material itself.

There are, at present, few reliable criteria by which one can decide which cases to treat by pulpotomy. The author's experience has been limited to deciduous teeth and young permanent teeth in which the roots can still be considered physiologically incomplete. These cases have consisted largely of teeth with carious exposure of the pulp, or accidental exposure of the pulp by fracture of the tooth. In clinical observation of many cases, it is believed that the most satisfactory results will be obtained in those cases in which no tissue death has occurred. If congestion of the pulpal tissues with extensive rupturing of the blood vessels has taken place there is little hope that the pulp can recover. Ideally, there should be little pulpal haemorrhage on exposure, and the coronal portion of the pulp should exhibit a clean glistening appearance when the roof of the chamber is removed. The individual patient factor seems also to play a part in determining the nature of the pulp reaction and response.

Vital pulpotomy has proved of great usefulness in managing broken permanent anterior teeth. A majority of these cases seem to come within the period of incomplete root development, and because of the size of the pulp chambers and the severity of the fractures, present with pulp exposures. In the author's experience, better results can be obtained by using the vital pulpotomy than by capping the pulp, especially in those cases in which haemorrhage has occurred.

Summary

The vital pulpotomy technique is a reliable clinical procedure which can

be safely employed in cases of pulp exposure in children's teeth, provided that the pulp is vital at the time.

It is essential that the operation be performed under aseptic conditions and that the pulp be treated with care.

In all cases where vitality of the pulp was maintained post-operatively and when $Ca(OH)_2$ was used to cover the cut end of the pulp, a layer of secondary dentine was formed.

The remaining pulp tissue in healing takes on the appearance and the function of normal pulp tissue.

The usual means of testing the pulp for vitality are not reliable where a pulpotomy has been done. Radiographic evidence is the best means at present of determining the condition of the root and periapical tissues.

THE EVIDENCE THAT JUSTIFIES FLUORINE THERAPY

by H. G. MIKKELSON, D.D.S., Minneapolis, Minnesota

Condensed from Minn. Dist. D. Jour., Dec., 1948

There has accumulated in the past six years a considerable volume of scientific evidence to support the routine use of fluorine therapy. The skepticism and lack of enthusiasm shown by some of the older dentists reflect our experience with scores of other drugs that were popular for a time but were eventually discarded. We were especially disillusioned when we learned the truth about that old reliable remedy silver nitrate. A study on a group of children using one side of the mouth as a control, revealed that it was worthless in preventing or arresting caries.

There is now additional evidence from research work in the laboratory that confirms the clinical data on fluorine therapy. Philips and Swartz have been doing research work to determine the exact mechanism of fluoride protection. They believe that it is not absorption, but that a definite chemical change occurs. They observed the following changes take place:

1. An increase in the surface hardness of the enamel as determined by a new highly sensitive instrument called the Tukon Tester.

2. Increased resistance of enamel to action of acids. There was a marked difference in hardness tests between the treated and untreated teeth after being immersed in acetic acid for five minutes.

3. Penetration is deep. Severe brushing with pumice sufficient to expose change in hardness tests.

Swabbing with cotton was much more effective than either spraying or immersion of the tooth in fluorine.

To advocate fluorine therapy does not imply that we will abandon other approved and tested methods of caries prevention. Restriction of sugar in the diet, and oral hygiene in conjunction with Amuroxol (Dr. Kesel's) tooth paste, will also contribute to the overall program of caries prevention.

Nor need we be apologetic in advocating this treatment to our patients. If we believe in it, our fee will be justified, and, like any other service should be based on the time consumed.

The personality needs of the aged as with other human beings can be crudely designated as (a) the need of invigorating experience; (b) the need of material security; (c) the need for belonging to a group; and (d) the need for maintenance of self-esteem. In whatever ways these needs are reflected in behaviour patterns and personal attitudes they obviously have their roots in the structure of society and the associated cultural values. The physiological, pathological and psychological impediments in functioning have meaning in so far as they affect the personal-social relationship.—A. B. Stokes, M.D. in Can. M.A. Jour. Dec., 1948.

AN ESSAY ON DENTURE PRACTICE

by FRANK C. FURNISS, D.D.S., Columbus, Ohio

From Minneapolis District Dental Journal

The science and art of denture construction has made great progress in recent years. This progress is the result of more diligent study and training by dentists in this field and also of the vast improvements in materials and equipment available.

The possibility of producing natural appearing and well functioning denture replacements is such as to enlist the study, interest, and enthusiastic efforts of more and more general practitioners.

When we realize the vast number of people who should have either partial or complete dentures after they reach middle age, it is obvious that a large percentage of patients will apply for this service.

Investigation of reports of morticians reveals the startling statement that from the age of 50 upward no less than 80 per cent of bodies embalmed have either artificial dentures or are partially or entirely edentulous. Accepting these reports as reasonably accurate, it is obvious that the majority of elderly patients are in need of artificial teeth. Every one of these patients is entitled to the best possible denture service. Therefore, the general practitioner, who naturally is called upon to render this service should prepare himself by all means through study and experience to be qualified to do this work efficiently.

Every young dentist starting in to practise should try at once to improve his skill in the denture field. Too often, when fitting up his office, his laboratory facilities are slighted. A convenient laboratory of ample space, clean and well-ordered, and adequately equipped, will pay big dividends. And, if in the early years of practice, the young dentist would do his denture work himself, instead of immediately sending his case to the commercial laboratory, he would rapidly show improvement in skill, and through experience would gradually become successful in more and more denture cases. That the work is interesting, there can be no doubt, dealing as it does with such a variety of procedures, involving, besides the knowledge of anatomy, an appreciation of art, a fine degree of manual dexterity, and meticulous care in the use and assembly of the beautiful materials and equipment necessary in this work. Every step in denture work must be performed with as nearly perfect precision as possible. Neglect of any step invites failure.

It is not the purpose of this essay to describe technical procedures, but it is desired that the general practitioner's mind be inspired to a more profound appreciation of the importance of denture work.

It is unfortunate, but it is true, that the majority of dentists are inclined to neglect denture work. They usually look upon it as an unpleasant, if not an unclean job. Having had little experience in this work in the college years, they are insufficiently equipped to render this service efficiently in the early years of practice. Often times, lack of interest, followed by discouragement, impels them either to discontinue denture work altogether, or refer it to the commercial laboratory. If this procedure continues, no improvement in denture service will follow, no matter how long the dentist remains in practice.

It is not often that the beginner in dental practice finds his time wholly occupied with patients. This extra time may be profitably spent in study and practice on denture cases, whether or not any fee is attached. He didn't get paid for his practical cases in college. Rather, he paid for the privilege of doing them. Therefore, he will not lose anything by experimenting on a rela-

tive or intimate friend, or even a deserving charitable case. If he makes a failure, he should study the cause of his failure, and having observed where he can improve, he should do the case over.

We rarely do a thing well unless we like to do it. And so, when repeated trials bring occasional successes, there is a natural feeling of elation in the accomplishment. This, then, inspires confidence, and stimulates an interest and a desire to improve in technique.

Vast sums of money are spent today on cosmetics. But no face can be beautiful with ghastly looking teeth. The dentist who will prepare himself to make natural looking, attractive and well-functioning dentures has a great opportunity to serve the public and also, to improve his income. If patients find out that a dentist can improve their looks and make artificial teeth that are comfortable and efficient in mastication and speech, they will travel long distances to find him and will not question his fee.

The time will come in the practice of every dentist when he will begin to slow down. The infirmities of age will manifest themselves and he will find that he is no longer able to spend long hours over the dental chair. If in anticipation of this circumstance, he has developed a fine skill in his denture work, he can continue an active practice just as long as he can see and use his hands skillfully. The very patients whom he has served in the beginning of his career have grown old with him, and doubtless many of them will have lost their natural teeth and if they still have confidence in him, will call upon him for artificial substitutes. Are you preparing yourself to meet this responsibility?

PRACTICE OF DENTISTRY FOR CHILDREN

by CHARLES A. SWEET, D.D.S.

Condensed from Southern California State D. Assoc. Jour.

A dentist must be proficient in the relief of pain—real or imaginary. By applying a little psychosomatics and developing a good chairside manner most imaginary pain can be dissipated or controlled.

Real pain is very different and must be treated therapeutically to produce satisfactory results. Sedation should be employed far more frequently with children than is the custom as it is a conditioner which makes easier the relief of imaginary pain and the administration of other therapeutic agents necessary to the desensitizing of the area that is to be operated upon.

Sedation should be used (1) To reduce psychic shock, (2) To counteract the effect of the vaso-constrictor used in local anaesthetics. (3) To increase the effectiveness of procaine, (4) To minimize procaine toxicity and (5) To reduce physical resistance. The medication usually resorted to is one of the short acting barbiturates such as pentobarbital sodium.

The dosage of the sedative should be varied according to the weight of the child ranging from ¾ grain to 1½ grains. One should know that sedation will be enhanced if on retiring the night previous to the appointment the child is given pentobarbital sodium and then again given ¾ grain to 1½ grains immediately preceding his appointment.

The most effective and simplest means for a dentist, his assistant or a parent to give a sedative is to open the capsule, mixing the powder with simple syrup (sugar water) in a teaspoon as some people both young and old seem to have difficulty in swallowing a capsule even though the capsule may be small. The reaction time of the sedative is greatly lessened by this method of administration.

With mental deficients or extreme

cases of misbehaviour a rectal suppository made of cocoa butter containing pentobarbital sodium can be employed, but the dose of the sedative should be increased.

Sedation will be found helpful when photographic records are desired or x-rays are necessary on account of its quieting effect allowing time for focusing and exposure without movement of the patient.

Whenever a sedative is given, the patient should not be dismissed without an escort as the effects of sedation may last much longer than anticipated. Children frequently appear to have returned to normal, yet their reaction time is considerably slowed and their judgment is materially upset.

Preparing the Field

A warm spray is used to flush the area where the injection is to be made. The tissue should be dried and sterilized before the needle is inserted.

A topical application of 2 per cent iodine and 10 per cent amino benzocaine in prophylene glycol placed on the tissue and allowed to remain two minutes will sterilize and desensitize the mucosa.

	Grams or c.c.s.
Rx Benzocaine	10.0
Propylene Glycol q. s.	100.0
Iodine	2.0

Sig: For Topical Application

The tensing of the tissue, a sharp needle and the slow deposition of the anaesthetic solution assists in decreasing sensation and adds to the patient's comfort.

Anaesthesia

There should be no hesitancy in the use of local anaesthetics regardless of the age of the patient, yet many dentists harbour fears regarding local anaesthetic solutions and the equipment necessary for their administration.

Complete anaesthesia may be obtained if you master any one of the accepted techniques of injection and inject not more than two and one half c.c.'s of 2 per cent procaine containing a vaso-constrictor of one to fifty thousand or one to sixty thousand or one to seventy-five thousand. This amount of anaesthetic solution properly placed will produce all necessary anaesthesia for any operative procedure.

When there are multiple scattered extractions general anaesthesia may be necessary. Office administration of all general anaesthetics has its hazards including nitrous oxide-oxygen which exposes a patient to anoxia. Adequate supply of oxygen is obviously the essential factor in preventing this condition.

THIOPENTAL SODIUM IN THE PRACTICE OF ORAL SURGERY

by STEWART EVERSON, D.D.S., Los Angeles, California

Condensed from Jour. of A.D.A. Feb., 1949

The ease of intravenous administration of anaesthetics is unparalleled by any other method. Undoubtedly this accounts for the wide usage and credit it so rightly has received and, conversely, for the disapproval of some practitioners.

After reviewing the literature on the use of thiopental sodium (Pentothal Sodium) for intravenous anaesthesia, I have deduced that the censure of this form of anaesthetic is the result of disregard of the dangers that accompany its injudicious use. Disapproval is directly traceable to lack of proper judgment by the anaesthetist rather than to faults of the anaesthetic.

Contraindications

It is absolutely imperative that a history of the patient be obtained before the administration of thiopental sodium. There are many contraindications, some relative and a few absolute. The most common ones are:

1. Any serious interference with respiratory function, especially if there is mechanical obstruction of the respiratory passages.

2. Chronic pulmonary disease characterized by production of large amounts of sputum, such as bronchitis and bronchiectases. The hazard of respiratory obstruction or laryngospasm from such secretions is great.

3. Serious cardiac disease, especially where there is congestive failure, angina pectoris or any other evidence of disease of the coronary artery.

4. Any debilitating condition, such as chronic illness, severe anaemia or any other disorder that might make the patient a poor risk for any type of general anaesthesia.

5. Structural abnormalities, such as ankylosis of the jaws, which might interfere with proper access to the mouth and pharynx.

6. Patients with systolic blood pressures over 200 mm. or under 90 mm. of mercury.

7. Very young or very old patients.

Under no circumstances, except possibly in extreme emergency, should a patient be given an intravenous anaesthetic if he has partaken of food or drink within the preceding four hours. Vomiting and aspiration of the vomitus are serious hazards, difficult to manage, and serious pulmonary complication or fatality may result.

In my practice, nitrous oxide frequently is used as a supplement to thiopental sodium. These anaesthetics are used together rather than individually because one counteracts the bad effects of the other, allowing each to act with optimal efficiency.

Equipment

One should not, under any circumstance, attempt to use thiopental sodium in the office unless he has the following emergency equipment and drugs: (1) anaesthetic machine to administer oxygen under pressure (resuscitators are practically useless and are probably the cause of many fatalities), (2) portable oxygen machine, with pressure bag, for administration of oxygen in the recovery rooms, (3) aspirator, (4) laryngoscope, (5) endotracheal tubes of various sizes and (6) analeptics (picrotoxin or pentamethylenetetrazol).

Advantages

Thiopental sodium has the following advantages:

1. It is noninflammable and nonexplosive, permitting its use in the presence of live cautery.

2. Induction is easy and convenient.

3. It produces relaxation adequate for oral surgery.

4. Postoperative recovery is rapid without nausea.

5. Induction is rapid, a boon for apprehensive patients.

6. The patient's appreciation of the experience eliminates fear or apprehension of future anaesthetic experience.

Comment

There is no doubt that a local anaesthetic is the safest anaesthetic. However, the majority of patients request a general anaesthetic for oral surgical operations, and thiopental sodium, because of its numerous advantages, is becoming increasingly popular. After employing thiopental sodium, with or without nitrous oxide as a supplement, for all types of operative procedures in the field of oral surgery, I am convinced that this anaesthetic approaches the ideal in general anaesthesia for office use when the drug is administered by a thoroughly trained anaesthetist who is able to deal with any situation which may present itself.

A young man of burning ambition approached a great merchant and begged him to reveal the secret of his success.

"There is no easy secret," pronounced the merchant. "You must jump at your opportunity."

"But, sir, how can I know when my opportunity comes?"

"You can't," declared the merchant. "You've just got to keep jumping."— Selected.

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Editorial

MAGAZINES IN DENTAL OFFICES

In the Cosmopolitan magazine of January 1949 there appeared an article entitled "What Should Your Dentist Charge?" In this article it is stated that a housewife visited four dentists for a mouth examination and an estimate with the result that one dentist said there were no cavities, one said there was one, one found three and the last four. The estimates including prophylaxis ranged from $7.00 to $74.00. It is well known that there is a great difference of opinion among dentists as to the ideal time to intervene in the case of incipient caries. One dentist might advise observing for six months while another would favour extensive MOD restorations in gold or amalgam. Naturally the estimates would vary a great deal. In this case nothing is said about the type of restoration. A St. Louis investigator found a variation of from $73.00 to $91.00 for a partial denture while we all know that the variation would be more than this when given by the same dentist if a different type of construction and material were used. The article points out that an intelligent person does expect dentists to agree on work to be done and has a right to expect that within a given area the prices charged will bear some relationship to each other and that there doesn't seem to be much sense to the situation as it exists today. The fact is that there is simply no sense to the article that appeared in this popular magazine, an article which cannot possibly do any good but only stir up doubt in the minds of the readers as to the honesty of the members of the dental profession. Most dentists are honest and try to give an honest service to their patients. Obviously the advice given to patients will vary considerably. Any one dentist may give several estimates to a patient depending on the

type of work to be undertaken and these estimates may vary a very great deal. It is indeed surprising that a magazine such as the Cosmopolitan would publish such an article.

In the January 8 issue of Collier's magazine appears also a dental article of doubtful value as far as the public is concerned; an article entitled "Has the Toothache Been Stopped?" The article states that if you go to the dentist once or twice a year for fillings, or have children who are punished by aching teeth every time they eat a piece of candy or a cold dessert this may be one of the most important magazine articles you have ever read. It is stated that this is the story of a radical advance in modern dentistry, a quick painless inexpensive treatment which promises to banish a large percentage of dental decay; that it isn't the fluoride treatment but something which has been perfected and proved in the last few months, referring to the Gottlieb theory of impregnation. To say that this treatment has been perfected and that by this method dental caries will be reduced by 90 per cent is stating something that is not at present accepted by prominent scientists of our day. There would appear to be inadequate evidence to prove or disprove the claims of Dr. Gottlieb and until such evidence is available it seems most unfortunate that premature publicity should be given to this treatment and so encourage probable false hopes in the minds of the 90 per cent of our population now subject to dental caries.

In the February issue of Liberty magazine an article appeared entitled "Are the Dentists Failing Our Children?" pointing out that dentists prefer to work for adults and simply won't be bothered with children, that the dental profession is not making an effective effort to preserve the health of our children. It is pointed out that fluorine treatment prevents tooth decay in over 65% of the children treated and yet that it is practically impossible to find a private dentist who will give this treatment, in fact the whole profession would like to see the question dropped, that the dental profession has a ready-made excuse for dodging its responsibility. Such false statements need no explanation or contradiction in this particular article as such is so apparent to any well-informed man or woman, but our concern is that these magazine articles are read by thousands of our people and the harm done is inestimable.

All of this raises the question at least of "What magazines should be found in the dental reception room?" I would say that, at least, 50,000 people a day pass through the dental offices of Canada. Is it right and proper, is it in the interests of the people of Canada to say nothing about the interests of the dental profession to have these patients pick up such magazines on our reception room tables and read such misleading statements as have been here stated?

Books and magazines and pictures leave indelible imprints upon the minds of youth and sometimes a wrong suggestion may be the match which lights a flame of lifelong durability. On the other hand these publications have often started youth on successful careers by their helpful suggestions.

Wrong suggestions do just the opposite so let us do some house cleaning in our reception rooms and do it now.

"Books are strange things. Although untongued and dumb,
Yet with their eloquence they sway the world;
And, powerless and impassive as they seem,
Move o'er the impressive minds and hearts of men
Like fire across the prairie. Mind sparks,
They star the else dark firmament."

M. H. G.

BOOK REVIEWS

In The Dentist's Office, by G. Archanna Morrison with contributions by Lester W. Burket, M.D., D.D.S., J. Murray Gravel, D.M.D., Fred D. Miller, D.D.S., Clyde A. Nelson, D.D.S., and Robert Stenaff, D.D.S. 256 pages with 31 illustrations. Published by J. B. Lippincott Company, 2083 Guy St., Montreal.

This is a valuable book for the Dental Assistant because Miss Morrison writes from her own experience and has the Assistant's point of view. Readers may not agree with the author in all her approaches but her suggestions are thought provoking and her methods are valuable in planning a definite policy in dental office management with an assigned responsibility to the assistant.

The book is written in three sections:

Part one deals with patient relations and in the opening chapter the author discusses the qualifications of the dental assistant under the title "What it Takes," and this is well done. In other chapters there is a discussion of "Tact and Contact," including telephone technique and the reception of patients in the office. This together with a chapter on Child Management and a suggested routine for early approach to the child patient is very worthwhile.

The second section deals with the assistant and the dental surgery. As the book is intended for use of auxiliary dental personnel as a group including hygienists we find here information not essential to the duties of the dental assistant but useful just the same. Among other subjects dealt with here we find operating room conduct, care and sterilization of instruments, dental materials and their manipulation, the dark room and processing technique.

The final section concerns the business management of the office. In these closing chapters some good practical suggestions are offered in business routine including supply maintenance, case management, collections and establishing a basic fee through cost analysis.

This book is easy to read, interesting and full of information. There is a need for it both as a guide and a reference and there is a place for it in every office. T. R. M.

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The 1948 Year Book of Dentistry. Edited by Lester Cahn, D.D.S., Chairman of Division of Oral Pathology, Columbia University; Donald A. Keys, D.D.S., A.B., Professor and Chairman, Dept. of Operative Dentistry, Univ. of Nebraska; Carl W. Waldron, M.D., D.D.S., Clinical Professor of Oral Surgery, Univ. of Minnesota School of Dentistry; Stanley D. Tylman, D.D.S., M.S., Professor of Prosthetics, Univ. of Illinois the College of Dentistry; George R. Moore, D.D.S., M.S., Professor and Head of Dept. of Orthodontics, School of Dentistry, Univ. of Michigan. 656 Pages. 447 Illustrations. Published by Year Book Publishers, 304 Dearborn St., Chicago 4. Price $5.00.

This encyclopaedia of dental literature is divided into five sections namely Oral Pathology and Oral Medicine, Operative Dentistry, Oral Surgery, Prosthetic Dentistry, and Orthodontics, each section being edited by one of the men mentioned above and all of international reputation.

The book opens with a treatise on Oral Manifestation of Systemic Disease by Dr. Lester Cahn. Oral Medicine is defined as the science or art of presenting, alleviating or curing disease of the oral cavity. This article is well worth perusing since many lesions of the mouth are simple manifestations of sys-

temic derangements and the dentist should be prepared to recognize these abnormalities.

The Year Book of Dentistry is always well worth while. M. H. G.

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Horace Wells, Dentist, Father of Surgical Anaesthesia. Proceedings of Centenary Commemorations of Wells' Discovery in 1844 and Lists of Wells' Memorabilia including bibliographies, memorials and testimonials. Compiled by the Editor, William J. Gies for the Horace Wells Centenary Committee of the American Dental Association. 415 pages.

This book is splendidly prepared as is characteristic of anything undertaken by Dr. Gies. Dentistry's gift to the cause of surgical procedure by means of general inhalation anaesthesia is presented in a clear and convincing manner.

A full account of the International Wells Centenary Celebration is included. This celebration was held in Hartford, Connecticut, December 11, 1944, just one hundred years following the discovery of general anaesthesia by Horace Wells and the active participants on the occasion included Canada and Costa Rica in addition to the United States. Accounts of the celebration in Latin America, France, and England are also fully described. Part III outlines the commemorations in the United States, additional to the international Wells Centenary celebration in Hartford, Connecticut, also resolutions adopted by the United States Senate, the American Medical Association and the procedure of other organizations.

To those who are interested in the history of dentistry this book should be perused.

M. H. G.

CORRESPONDENCE

Letter from a Sikh patient to Dr. A. P. Salter, Victoria B.C.

Dear Sir

I was sak in the houses and now I movie to youbou. B.C. If. you want reat mi a latters you reat to youbou. Mula singh,, I wall be in Victoria in two, or three. weeks I wall see you. I pleces lat mi know if you want mi befour you reat mi a latter I was ever sorie, I never come at your days.

Your, truly.

ROYAL CANADIAN DENTAL CORPS NEWS

The Minister of National Defence has recently announced the promotion of Lt.-Col. C. B. Climo, D.C.M., E.D., to the rank of Colonel and his appointment as Deputy Director General of Dental Services.

Colonel Climo served in the ranks in the Canadian Field Artillery during the First World War winning the D.C.M. Between wars, he was actively associated with the Non-Permanent Active Militia and commanded the 53rd Battery, First Halifax Coast Brigade, R.C.A., in the rank of Major. On the outbreak of hostilities in 1939, he was transferred to the Canadian Dental Corps and served as District Dental Officer M.D. 6, and Command Dental Officer No. 3 Training Command, R.C.A.F., before being posted overseas where, in addition to commanding Nos. 1 and 2 Dental Companies, he held the appointment of Senior Dental Officer in the Canadian Dental Corps in Italy and the appointment of Assistant Director of Dental Services at C.M.H.Q. in England.

Colonel Climo was born in St. John, N.B., but moved to Halifax, N.S., where he was educated, and received his degree of Doctor of Dental Surgery from Dalhousie University in 1923. He practised in Halifax from the time of graduation until the outbreak of War in 1939, holding an appointment on the staff of Dalhousie Dental School, as well as being Secretary-Registrar of the Provincial Dental Board of Nova Scotia for some years.

Colonel and Mrs. Climo, with their two children, reside at 925 Bronson Avenue, Ottawa.

Authority has recently been granted for the conversion and redesignation of No. 3 Coy. R.C.D.C. (R.F.) to No. 15 Base Coy. (R.F.) located at Montreal, P.Q. This change of establishment will authorize the appointment of 17 additional Dental Officers in the Montreal Area.

Authority has been granted for the reallocation of No. 3 Coy R.C.D.C. (R.F.) to Alberta with headquarters at Edmonton.

Reduced Fares for Rail Travel to the Annual Meeting

The Canadian Passenger Association has authorized special convention rates for members of the Canadian Dental Association and their families travelling by rail to the Annual Meeting at Saskatoon.

Identification certificates permitting members to purchase tickets at a considerable saving may be obtained on application to the Secretary, Canadian Dental Association, 211 Huron St., Toronto, Ontario. IN ORDER TO PURCHASE TRANSPORTATION AT REDUCED RATE PURCHASER MUST POSSESS IDENTIFICATION CERTIFICATE.

FARE BASIS—Going and returning same route—one and one-half the adult normal one way first, intermediate or coach class fare applying via route used as shown in tariffs, plus twenty-five cents.

RETURN LIMIT—Thirty days in addition to date of sale.

NEWS FROM THE PROVINCES

ONTARIO

Faculty of Dentistry University of Toronto News

The following extramural lectures were given during March by members of the Faculty staff—

March 15—Dr. G. C. Hare—Brant County Dental Society, at Brantford.

March 23—Dr. F. T. Pearson—Peterborough Dental Society, at Peterborough.

March 29—Dr. R. E. Diprose—Lambton County Dental Society, at Sarnia.

March 30—Dr. J. H. Johnson—Simcoe County Dental Society, at Orillia.

* *

Dean Ellis presented a paper and clinic at the Children's Health day under the auspices of the Ottawa Dental Society. He was accompanied by two undergraduate members of the fourth year in the persons of Mr. George E. Burgman and James G. Hall, who also presented essays.

* *

Dr. W. G. McIntosh has accepted an invitation to speak at the seventh New York District Dental Society meeting on March 21 and 22.

* *

Dr. H. H. Pearson of Montreal was a visitor to the Faculty on February 3. He is a past governor of the College of Dental Surgeons of Quebec, one of the founders of the Montreal Endodontia Study Club; Chairman of the Study Club Committee of the American Society of Endodontists. He has presented clinics before the three dental societies in Montreal, the Canadian Dental Association meetings, and the American Society of Endodontists; and has been a guest lecturer at the Dental Schools of McGill and University of Montreal.

* *

A study of the class lists of both the predental and the first dental years at the Faculty indicate a distribution trend relative to the size of communities from which enrolled students come—

Predental Year

Communities of up to and including 2,000 contributed 16% of enrolment.

Communities of 2,000 to 10,000 population contributed 19% of enrolment.

Communities of 10,000 and over contributed 65% of enrolment.

First Dental Year

Communities of up to and including 2,000 contributed 15% of enrolment.

Communities of 2,000 to 10,000 population contributed 16% of enrolment.

Communities of 10,000 and over contributed 69% of enrolment.

Students residing in York County comprise 51% of the enrolment, (most reside in Toronto). The average per county, excluding York County, is 4.4.

* *

On March 21 the Heads of Departments convened in the Dean's Office for the purpose of discussing the teaching in Nutrition, Dental Caries, and Prevention.

* *

The third of a series of lectures sponsored

Photo by W. J. Simpson, St. Catharines

PRESENTATIONS AT ST. CATHARINES

Left to right—Dr. William McLean, Dr. John O'Flynn, Dean R. G. Ellis, Dr. John Fitzgerald, and President Dr. Frank Dawe.

by the Health League of Canada, Toronto Branch, was given April 1, 1949 at 8.30 p.m. by the Hon. Paul Martin, Minister of National Health and Welfare in the Eaton Auditorium. The subject of his address was "The Dominion Health Plan — How It Affects You."

* *

The next annual meeting of the American Association of Dental Schools will be held in Chicago, Illinois, on June 27 to 29 next.

* *

At the Ninth Annual Children's Dental Health Day, sponsored by the Cleveland Dental Society, February 6, Edward A. Coney read a paper on "Space Maintenance as Applied to General Practice", and Richard E. Cline selected as his topic, "The Value of a Progressive Diagnostic Chart in General Practice." The papers presented by both these Final Year students were well received and reflected credit upon the excellent instruction being given in the Department of Pedodontics.

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Niagara Peninsula Dental Association

This young society, organized only a few years ago is recognized as one of the most progressive groups in Ontario. At the regular meeting held in St. Catharines on February 18 there were 60 members present to hear four well known dental speakers—Dean R. G. Ellis, University of Toronto, and Drs. D. W. Gullett, H. A. Swales and S. A. MacGregor.

President Dr. Frank Dawe made the meeting a unique occasion in that three members of the society who have been in practice in the city of St. Catharines for 50 years were presented with honorary life memberships. In the accompanying picture Dr. John O'Flynn is receiving his coveted souvenir from Dean Ellis on behalf of the association. Dr. John Fitzgerald and Dr. William McLean were similarly honored. All of these men are highly respected members of their profession and grand citizens of the community in which they serve.

A further ceremony paid tribute to Dean Roy Ellis when Dr. McLean presented him with an honorary life membership as a token

of esteem and in recognition for his contribution to Dental Science.

The members of this association deserve commendation for the splendid work being done in this section of Ontario.

•

Dr. F. A. Blatchford Honoured

Dr. F. A. Blatchford of Fort William was honored by the Thunder Bay Dental Association at a meeting in the Prince Arthur Hotel Feb. 9. He was presented with a desk set by the association for his work for dentistry and as a former president of the board of the Royal College of Dental Surgeons.

Dr. W. D. Ramore made the presentation. Dr. A. B. Kaukinen proposed a toast to the Royal College of Dental Surgeons which was responded to by Dr. T. H. Hutchison.

Dr. J. S. Strachan introduced the guest speaker, Dr. R. K. Dewar. Dr. Dewar, recently returned from post graduate studies in Britain, addressed the meeting on medical and dental conditions in Great Britain at the present time.

Dr. G. K. McKeown, president of the association, presided. Dr. O. J. Egan was in charge of arrangements.—Port Arthur *News Chronicle.*

•

Toronto Study Club of Dental Technicians

The regular February meeting of the club was mostly a business meeting together with the showing of a sound picture travelogue on Africa.

Mr. B. Sweet, Mr. S. Sweet, and Mr. K. Pearson were welcomed as new members to the group.

C. BLANCHFORD

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Class of 4T6 Re-Union

King Edward Hotel May 16, 1949. Subscription 5.00. Send cheque with acceptance to Dr. R. A. Clappison, 170 St. George Street, Toronto, Ontario.

QUEBEC

Complimentary Dinner Tendered to Dr. A. L. Walsh

On the evening of January 25 the Windsor Hotel, Montreal, was the scene of an enthusiastic testimonial dinner in honour of Arthur L. Walsh, D.D.S., F.A.C.D., recently retired dean of the Faculty of Dentistry, McGill University. Approximately two hundred members of the profession sat down to dinner which was presided over by Dr. D. P. Mowry, Dr. Walsh's successor as dean. Head table guests and speakers included Dr. F. Cyril James, Principal and Vice-Chancellor of McGill University who in responding to the toast to "Alma Mater" referred to Dr. Walsh as "an outstanding example among men who by their devotion and enthusiasm created something better than that which they found when they first took office"; Dr. H. J. Merkeley, Winnipeg, President of the Canadian Dental Association; Dean Roy Ellis, of the University of Toronto; Dean Ernest Charron of the University of Montreal; Dean J. S. Bagnall of Dalhousie University; Dean Scott Hamilton of the University of Alberta; Dr. Harvey W. Reid, President of the Royal College of Dental Surgeons of Ontario; Dr. J. Johnson, President of the Toronto Academy of Dentistry; Dr. Ephrem Vinet, President of the College of Dental Surgeons of Quebec; Dr. Don W. Gullett, Secretary of the Canadian Dental Association; Dr. J. N. Blacklock and Dr. W. G. Leahy.

The toast to the guest of honour was proposed by Dr. J. N. Blacklock who in a most fitting manner traced the highlights of Dr. Walsh's career from early days when he shone as an all round athlete and was active in young men's work, through service in World War I to graduation in dentistry in 1920 and devotion to dental education in which field he became outstanding, his contributions to it receiving international recognition. His rise to preeminence in his profession was due not only to his abilities but to his keen desire to serve his fellowmen, Dr. Blacklock said.

Presentation of a painting of a Laurentian scene, the work of Thomas Garside, was made by Dr. W. G. Leahy, Superintendent of the McGill Dental Clinic, Associate Professor of Operative Dentistry and long time associate of Dr. Walsh. Dr. Leahy particularly lauded Dr. Walsh for his interest in young men—"He always had the best interests of his students at heart", he said, and it was with great pleasure and with real enthusiasm that on behalf of the group present he made the presentation to a "prince of a fellow".

Presentation of a radio was also made to Dr. Walsh by Dean Scott Hamilton, Chairman of the Committee on Dental Education of

the Canadian Dental Association on behalf of that committee. He mentioned how Dr. Walsh had been instrumental in the formation of a committee on Dental Education and stressed the national significance of his many contributions to it.

Scores of telegrams from many points in the Dominion and the United States were read out to the audience by Drs. A. D. Richardson and D. H. Muhlstock.

All speakers stressed the unique and pioneering contribution to the teaching and practice of dentistry that Dr. Walsh had made and Dean Ernest Charron of the University of Montreal lauded him particularly for his enthusiastic desire to foster increasingly closer contact between English speaking and French speaking dentists and students.

In replying to the toast to himself and to the various speakers Dr. Walsh first expressed his deep appreciation for the enthusiastic gathering in his honour and for the wonderful gifts which he would forever cherish. He referred to his 21 years of most pleasant association with McGill University and the Montreal General Hospital and to the joy he had found in his work as President of The Canadian Dental Association and chairman of the Council on Dental Education. He stated that his educational work had brought to him enjoyment and a chance to be of service to his fellows and friends. He went on particularly to stress the part that friends played in his career and of what great value they had been to him and how they had enriched his life. Dr. Walsh continued "On an occasion like this we know that our staunch friends are mindful of the old saying

'Be to my virtues wondrous kind
And to my faults a little blind'

It is in that tolerant and very forgiving spirit that I am happy and thankful to find my friends here this evening. I find myself recalling the famous words of Dante, when he said to Beatrice—'For which of my faults have you loved me, Beatrice?' If you, my friends, have found any of my faults pardonable, believe me I appreciate your kindly tolerance very deeply. It has been for me an honour as well as a pleasure to be associated with you. I find in your warm fellowship and cordial friendship my very satisfying reward."

E. T. B.

Dr. Gerald Franklin Appointed Professor of Orthodontia

A recent appointment in the Faculty of Dentistry, McGill University, was that of Dr. Gerald Franklin to full professorship and head of the Department of Orthodontia. Dr. Franklin succeeds Dr. A. W. McClelland who recently resigned.

Dr. Franklin was graduated in dentistry in 1922 from McGill University and has seen continuous service on its teaching staff since that time except for a period of more than five years when he was granted leave of absence to serve in the Royal Canadian Dental Corps.

He is a member of the American Society of Orthodontists, the British Society for the Study of Orthodontics as well as national and local dental societies. He has conducted clinic lectures in England, the United States and Canada and has published a number of papers which have appeared in Orthodontic and dental journals.

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Montreal Dental Nurses' and Assistants' Association

Mrs. Barbara Collier Mutch was the guest speaker at the monthly meeting of this Association which was held on February 7 in the Mount Royal Hotel.

Mrs. Mutch is Professor of Nutrition & Diet Therapy at the University of Montreal. Her subject was "The Importance of Foods to Health." The speaker was introduced by the president, Miss Margaret Good, and thanked by Miss Dora Good.

"Teamwork in the Dental Office" by Dorothy McRae and "An Efficient Dental Assistant" by Mildred Rosenberg were added attractions to a very enjoyable and instructive evening which was very well attended by the members.

MILDRED STARR

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Mount Royal Dental Society

The Mount Royal Dental Society of the city of Montreal held a general meeting on February 18. The guest speaker was Dr. Irvin Tulkin of New York City who spoke on "How to Build a Successful Dental Practice." The meeting was well attended and proved to be very interesting.

S. HERSHON

NOVA SCOTIA

Sydney Dental Society

This Society holds monthly dinner meetings and two members provide the program each month which usually is in the nature of clinics. In December Dr. J. H. Burke gave a clinic on "Mandibular Fractures" and Dr. M. Cleaner on "Silicates."

At the January meeting Dr. G. A. Grovanneitti presented a paper on "The Development of Teeth."

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Halifax Dental Society

At the February meeting of this Society Dr. D. J. Tonning, Assistant Professor of Medicine at Dalhousie, discussed "Medical Emergencies in Dental Practice."

Dr. Tonning discussed several diseases and conditions which might be encountered in the patients who present themselves at the office. He pointed out some embarrassing sequelae which might be avoided if one was aware of the conditions before operating. One point in particular he stressed i.e. physical diagnosis or accurate observation and the deduction which could be made therefrom such as skin colour, condition of joints, hair and nails, posture, gait, colour of conjunctive, hearing etc.

During the course of the evening he covered many common complaints and a few which were unlikely to be encountered. Throughout the attention of the meeting attested to the interest of the members in the physical well-being of their patients. Following the paper a number of questions were discussed and answered.

Dr. H. S. Crosby moved a formal vote of thanks seconded by Dr. Nutlay. W.C.O.

BRITISH COLUMBIA

Vancouver and District Dental Society

The guest speaker for the March meetings of this Society was Dean Mowry, of the Faculty of Dentistry at McGill University. A considerable number attended the afternoon meeting, and the usual large turnout arrived for the dinner meeting. The subject presented was "Periodontia for the General Practitioner." Dr. Mowry gave his subject matter clearly and graphically, and left with those present much that could be translated into service in their own practices. Since British Columbia is, for the most part, topographically isolated from the rest of Canada, many of our visiting lecturers and clinicians come from the Western States. It was a distinct pleasure, on this occasion, to have this visit from an outstanding clinician from our own country.

A number of McGill graduates practising in the lower mainland of British Columbia gathered for a dinner to welcome Dr. Mowry, the evening before the meeting of the Society. A few hours were pleasantly spent in reminiscences of McGill, and in viewing several films showing activities at McGill during the past few years.

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B.C. Dental Association Convention

As the spring approaches, plans for the usual Convention of the British Columbia Dental Association are becoming intensified. A two-day meeting will be held in May, at the Hotel Vancouver in Vancouver, and the following program, which may be slightly altered before Convention time, is in the final stages of preparation:

The principal clinicians will be:

Sanford M. Moose, D.D.S., F.A.C.D. Clinical Professor of Oral Surgery, College of Physicians and Surgeons School of Dentistry, San Francisco, California.

Utilizing motion pictures, his subjects will be:

(a) General Oral Surgical Procedures for the Correction of Pathologic Lesions, Deformities and Maxillo-Facial Injuries.

(b) Surgical Procedures Necessary for Facilitating Prosthetic Installations.

Merrill G. Swenson, D.D.S. Professor of Denture Prosthesis, University of Oregon Dental School.

Utilizing motion pictures, his subject will be:

Complete Immediate and Partial Dentures. Friday's program May 13, will be restricted to the presentations of these two clinicians. Saturday, May 14, will be devoted to chair and table clinics, only, including the following:

Dr. F. Pratt—University of Washington
"Dental Anatomy Display"
(The Chairman of the Program Committee feels that the work of Dr. Pratt, and his approach towards the reproduction of

tooth anatomy ranks among the finest on the continent.)

Dr. K. Oviatt—Vancouver, B.C.
"Dental X-ray Technique"

Dr. W. L. Beamish—New Westminster
"Class 111 Gold Inlay"

Dr. W. Gallagher—Vancouver
"Periodontia"

Dr. L. Chapman—Vancouver
"Orthodontia"

Vancouver Ferrier Study Club
"Gold Foil Chair Clinics"

Inter-City Study Club
"Gold Foil Chair Clinics"

Department of Veterans Affairs Display, including:

Dr. H. Simmons—Vancouver—"Exodontia"

Dr. W. R. Bradley—Vancouver—"Classification and Treatment of Veterans"

Dr. M. Chechik—Vancouver
"Matrix Application in Amalgam Procedure"

Dr. F. J. Hoelscher—Seattle
"Crusading Against the Wholesale Cutting of Teeth for Jacket Crowns, Through the Use of Baked Porcelain Inlays."

Dr. R. L. Scharff—Vancouver
'Practical Application of Sodium Fluoride"

Post Graduate Courses

A course in Oral Pathology and Periodontology is arranged for the spring months, to be held in Vancouver, and to be conducted by Dr. B. O. A. Thomas, of the University of Washington. It is expected that there will be two periods in the afternoon and one in the evening of eight Mondays throughout the spring months, the dates of which will be announced later. The course will include histology, fundamental pathology, various disease conditions and treatment of actual cases in the final periods.

Dr. J. C. Brauer, also of the University of Washington, will conduct a similar course on Preventive Dentistry and Pedodontics, starting about the first of May, and continuing through four week end periods.

ALBERTA

Calgary Dental Society

The February dinner meeting of this Society was held on the fourteenth in the Sun Parlor of the Palliser Hotel.

Dr. Lorne Brooks of Calgary was the guest speaker on this occasion. Dr. Brooks returned recently from Ann Arbor, Mich., where he took advantage of a short course in Oral Surgery, designed to be of value to the general practitioner. His talk, very ably presented, outlined and highlighted this course, and was of much interest and benefit to the local members.

The election of a new executive, function to be effective Aug. 1, 1949, was held with the following result:

Pres. Dr. C. Spencer Lea,
Vice-Pres. Dr. C. M. Johnson,
Sec.-Treas. Dr. R. T. Shillington.

MANITOBA

Manitoba Dental Association

It has been our custom during the several occasions of recent years when the provinces have increased their financial support of the Canadian Dental Association thereby necessitating an increase of the provincial annual registration dues to report in this column the result of the annual collection of the Manitoba registration dues.

On every occasion when the dues have been increased a discount of two dollars has been allowed for the purpose of an inducement to pay the dues promptly so that as many as possible be on the list required to be sent to the Provincial Secretary of Manitoba of all licensed dentists who are in good legal standing as at the 1st of March. This year when the dues were increased to $40.00 no discount was allowed because of legal expenses incurred in the past few months which have to be met in this year's budget. We wondered if the dues would come in promptly as usual.

We are pleased to report that they were paid promptly as usual and only two written protests were received. One of these was from a member who has been registered since 1928 and has never attended any annual meetings or clinics. Another letter was received in 1944 from a member who had left Manitoba to practise in the United States. He left in 1938. You can imagine our surprise to receive a request in 1944 to be billed annually for the registration dues because he wanted to feel that he has a part in keeping up the good work being done by the Mani-

toba Dental Association in supporting the Canadian Dental Association. He has no ulterior motive in this matter. He is the Director of the Dental Division of the State Board of Health of Montana. He knows what public dental health means in public welfare. He is a Canadian by birth and he wants to have a part in Canadian Public Welfare. He paid the forty dollars this year and sent a couple of reports of the work being done by his Dental Division. We take off our hats to him. J.F.M.

Winnipeg Dental Nurses' and Assistants' Association

This Association held its third annual dance, Feb. 19 at the Royal Alexander hotel. Miss Kay Hoffard, President, with a group of assistants received. Patrons in attendance were,

Dr. & Mrs. N. C. Carmichael
Dr. & Mrs. Kenneth M. Johnson
Dr. & Mrs. W. H. Barber
Dr. & Mrs. Wallace Grant.

Proceeds for charity. F. JEFFREY

EMPIRE NEWS

GREAT BRITAIN

The Radio Orthodontist

Dentistry has found an honoured place in the B.B.C. programs, the latest subject being that of the irregularities of the teeth. Of these talks in the Home Service, four in number, three have been given already. The introductory lecture was on the formation of the teeth, the reason for the importance of regular teeth both for the health of the child and for its psychology and mental comfort; it was stated that irregularities made a child conspicuous and an object of ridicule among its fellows as shown by the remarkable fact that boys came to the hospital of their own accord to have their protruding front teeth straightened because of the teasing to which they were submitted. The lecturer emphasized the importance of early detection of these irregularities, of early oral hygiene, the prevention or detection of early caries and the retention of the first dentition for its natural duration. Diet and health of the child were stressed—a dramatic reference to the effect of the direct contact of sugar with the dental enamel was given as proof of the bad effect of continued sweet sucking. In support of this reports were given from various countries of the fall of the incidence of caries during the war due to the reduction of sugar. The effect of early loss of the deciduous teeth on irregularities was impressed upon parents.

Good Advice For Anyone

William E. Gladstone, the Grand Old Man of England, gave the following advice to a class of students:

"Be assured that every one of you has his place and vocation on this earth, and that it rests with himself to find it. Do not believe those who too lightly say, 'Nothing succeeds like success'. Effort, gentlemen, honest, manful, humble effort, succeeds by its reflected action, especially in youth, better than success, which indeed too easily and too early gained not seldom serves, like winning the first throw of the dice, to blind and stupefy. Get knowledge—all you can; and the more you get the more you breathe upon its nearest heights their invigorating air and enjoy the widening views, the more you will know and feel how small is the elevation you have reached in comparison with those immeasurable altitudes that yet remain unscaled. Be thorough in all you do and remember that though ignorance often may be innocent, pretension is despicable."—From the Dental Assistant.

An enlightened mind is not hoodwinked; it is not shut up in a gloomy prison till it thinks the walls of its own dungeon the limits of the universe, and the reach of its own chain the outer verge of intelligence.—Henry Wadsworth Longfellow.

GENERAL NEWS

A.D.A. Trustees Vote Funds For Expanded Information Program—Reiterate A.D.A. Opposition to Compulsory Health Insurance

Additional appropriations of $72,875 to finance an expanded information program concerning national health planning were voted by the A.D.A. Board of Trustees at its annual session in February. The funds will be used to prepare and distribute to both the membership and the general public basic information relating to compulsory health insurance and other national health proposals now being advocated in Congress.

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A.D.A. Reports $185,021 Deficit for Last Half of 1948

The American Dental Association had an operating deficit of $185,021.99 during the last six months of 1948, it was reported to the Board of Trustees. Through economies, the deficit was $11,344.01 less than forecast on the basis of total budget appropriations for the six-months period. Anticipated deficit had been estimated at $196,366.

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Planning for Socialized Medicine

Condensed from Editorial in Can. M. A. J. March 1949.

It is often said that no country which has ever undertaken any plan for the provision of medical care of its people has ever abandoned the idea. That may be quite true, but it is not necessarily an unanswerable argument in favor of socialized medicine.

What we are faced with nowadays in Canada at any rate, is what appears to be an overpowering demand for immediate and complete socialization of medical services. It is true that the plan under which this is to be carried out is not yet clearly defined, but that is either an intentional obscurity of purpose, or a lack of thorough consideration of all the factors of the problem. If it is the first of these alternatives it bodes a poor outlook for those who must carry out the program as their professional work. The second alternative is self-condemned.

The highest standards of health are sought by all without exception, and are constantly being striven for by the medical profession. What medical men look for in vain is the keeping before the public of the inexorable results of socio-economic factors in such proposed planning. To say that we are dealing with such an important matter in health that we should be willing to allow for disadvantages in the plans is not good enough. This implies that after all many advantages will be gained, and minimizes the fact that economically there must be a limit to what a country can spend, even on health.

We would like to be assured that our views will be given consideration in whatever plans are evolved. We do not feel that the practising physician's point of view is sufficiently well represented by public health officials.

•

The Drift Towards A Socialist Democracy

The concensus of editorial writers whose opinions have become available on the address given by President Truman to the Congress on January 5 indicates their point of view that the President is considerably left of what used to be called the New Deal.

The final sentence of Mr. Truman's recommendation brings some interesting thoughts. The first time he uses the words "adequate medical care" and the second time "good medical care," whereas Mr. Ewing usually says "proper medical care." What is needed at this time is a definition by some appropriate agency of these terms "adequate," "good" and "proper". There is plenty of evidence that the kind of medical care given in other countries under such a system as that proposed for the United States has no resemblance to the quality of medical service that now prevails in the United States. When diagnosis is made on the basis of one or two questions and when therapy is provided on the same basis, when doctors try to see from 40 to 100 patients a day in order to give the kind of medical care that can be given under such circumstances and that is the case in many of the countries that have these systems —the medical care cannot be characterized as "adequate," "good" or "proper." Apparently what the proponents need is some adequate, good or proper terms to characterize the kind of medical care that they refer to. The medical profession contends that it is inadequate, bad and improper. The one positive characteristic that it has is the fact that it is pro-

vided by the government, following taxation of all of the workers of the country; a proper term would be nationalized, bureaucratic, governmental or socialized medical care.

Excerpt from Editorial in J. of Am. Med. Assoc. Jan. 15, 1949 per Public Health Economics.

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Midwinter Meeting of Chicago Dental Society

A total of 11,707 registered, and of this figure 6,191 were dentists and 5,516 were guests. Out of the 6,191 dentists registered, 2,798 were from the Chicago area and 3,393 A.D.A. visitors. The breakdown of the 5,516 guests is as follows: 42 physicians, 32 health nurses, 523 students, 1,387 family guests, 949 assistants, 141 hygienists, 290 lay persons, 500 laboratory personnel, and 1,652 exhibitors and guests. Dentists registered from approximately fifteen foreign countries and Texas.

•

Lactobacillus and Fluorine Report in Illinois

The Division of Public Health Dentistry of the State of Illinois Department of Public Health reports that approximately 6500 saliva specimens have been examined during the past twelve months to determine the lactobacillus counts.

The Illinois laboratory has distributed approximately 17,700 ounces of sodium fluoride to 2,100 dentists in the State of Illinois during the past twelve months.

If all this solution has been applied to the teeth of children, using the technique that has been advocated by the Division of Public Health Dentistry, we could assume that approximately 170,000 children have received the sodium fluoride treatment if this amount of the solution has been applied to the teeth. This estimate is probably high since we have asked the dentists to destroy the solution after it is one month old and obtain fresh solution. For this reason it would be difficult to estimate with any degree of accuracy the number of children who have received the treatment in Illinois. We believe that we could roughly estimate that 100,000 children have received the treatment which is a very good record since this is the first year the program has been in operation.

With the great amount of interest manifested by the public, these figures should be increased greatly during the next year.

Prevulcanized Latex

Successful use of a special type of rubber compound to replace lost tissue in the palate, cheeks and other parts of the face after surgigal removal of malignant growths is reported in the Journal of the American Dental Association.

Dr. Paul E. Richards, chief prosthodontist of the Central Dental Laboratory, Veterans' Administration Hospital, Hines, Ill., described how prevulcanized latex can be employed in dentistry as an effective mechanical replacement for mouth and cheek tissue removed in surgical operations.

It is pointed out that the present emphasis on early detection and surgical treatment of cancerous lesions has greatly increased the need for prosthetic replacement of the missing tissue. Particularly, is this true, Dr. Richards said, when surgical removal of tissue makes it difficult for the patient to eat, drink or speak normally.

The material is an aqueous solution consisting of about 65 per cent rubber solids and 35 per cent water. When the solution is dehydrated, a pure, smooth rubber deposit is formed which is then moulded to form an obturator.

"These obturators," Dr. Richards said, "are retained by undercuts or adhesives, and may be inserted or seated at any time after surgical intervention. They will be tolerated by the most sensitive tissues, even postoperatively."

Obturators made of prevulcanized latex are simpler in application and more effective in use than complex hinged appliances made of cast metal, vellum rubber, vulcanite rubber or solid rubber. All of the latter, he said, must be attached to some type of denture, whereas those made of prevulcanized latex are fitted tightly to the remaining tissue.

The new obturators are also superior in length of service, creation of sure seal, toleration by tissue and ease of manipulation, fabrication and insertion.

•

Innovation in Dental Education

An innovation in postgraduate dental education will be undertaken this fall by the University of Illinois College of Dentistry with the transmission of a series of programs by telephone to dental societies throughout the nation.

The University now is formulating plans to offer a course of six round-table discussions and symposia on "Current Advances in Dentistry." The series will be fed by the American Telephone and Telegraph Company to dental organizations from coast to coast.

The series will emanate from the Medical Center District on Chicago's near West Side. The American Telephone and Telegraph Company will have charge of all technical details, and has given guarantee of clear, unbroken transmission.

Dr. Allan G. Brodie, Dean of the College of Dentistry who has fostered the coast-to-coast transmission of the series, said that the two-hour presentations are designed to serve as monthly programs for interested dental societies. Programs have been scheduled for October and November of this year, and for the first four months of 1950.

The faculty for the series will be assembled from all parts of the U.S., and will consist of dental specialists of wide reputation. The new series is expected to be exceptionally advantageous to dental groups in rural areas and small communities which usually do not have an opportunity to hear outstanding men.

In transmitting the lectures, standard toll calls will be placed between Chicago and the cities in which the dental societies are located. The telephone presentation then will be "ballooned" over a loud speaker to the groups gathered in the distant cities.

Lantern slides shown in conjunction with the series will be sent by the University to all participating groups. Brochures and other material also will be furnished.

The subject matter for the series will include caries control dentistry for children, periodontia, oral diagnosis, the masticatory mechanism, dental education, and public health in dentistry. Contradictory opinion, whenever possible, will be evaluated through round-table discussions by leading proponents of present-day theories and methods.

•

Group Health, Washington, D.C.

The Group Health Association, which was set up several years ago to provide prepaid medical care for Government workers and other Washingtonians, has expanded into the dental field. It announced December 31 "the first planned dental program in the United States in which individuals have agreed to obtain complete, continuing dental care."

At the outset, participants will pay for actual services received on a cost-for-service basis. An official of the group said it was estimated this system would be in effect for about three years. "As soon as sufficient experience has been gained to establish the service on an annual fee basis the program will be converted to a thorough-going prepaid dental service," is was stated. This would be similar to the medical plan, under which members of the organization pay periodic fees and then receive treatment when it is needed.

The group maintains a staff of physicians and specialists and two medical centers. It will open a 12-chair dental clinic. William E. Warne, president of the association, who is also Assistant Secretary of the Interior, said the basic purpose of the program was to offer "comprehensive dental services of high quality at reasonable cost."

—*N.Y. Times Jan.* 1, 1949, *per Public Health Economics.*

IN MEMORIAM

Walter G. Kennedy of Montreal, Quebec, aged 75, died March 6. He practised in Montreal for 48 years before retiring eight years ago.

Dr. Kennedy was one of the founders of the movement that led to the organization of the Montreal Parks and Playgrounds Association and for this work was awarded an honorary degree by the University of Montreal. He was a member of St. Patrick's Society, serving two terms as president; a charter member of the Canada Council, first unit of the Knights of Columbus in Canada; a life member of the Irish Historical Society; a member of the Beaconsfield Golf Club and the Royal St. Lawrence Yacht Club.

Dr. Kennedy is survived by his widow.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 AVRIL, 1949 NO 4

Etude sur la Névralgie du Trijumeau

par FRANCEL PAPAILLER, B.A., D.D.S., L.C.D., Gonaïves, Haiti

(suite et fin)

Nevralgie Du Trijumeau (Secondaire)

La névralgie secondaire du trijumeau, qui fera l'objet de cette seconde partie de notre étude, peut, comme la névralgie primaire, résulter de l'une des conditions, que nous allons énumérer, ou bien, elle peut être de cause inconnue.

Conditions

Dans un article publié en septembre 1939, Mark, A. Glasser, M.D. (A.D.A., vol. 26) porta à sept le nombre de conditions pouvant provoquer la névralgie secondaire du trijumeau. Nous reprenons ici son exposé pour nos lecteurs.

A—Conditions Dentaires.

Dans les conditions d'origine dentaire, il a fait mention des facteurs suivants:

1—Dentine exposée ou caries superficielles
2—Anomalie dans l'éruption de la 3e molaire
3—Troisième molaire incluse
4—Présence de nodule dans la pulpe dentaire
5—Pression exercée par les racines des molaires sur le nerf dentaire inférieur.

B—Tumeurs

1—Ganglion de Gasser
2—Tumeur du cerveau
3—Lésions nasopharyngiennes
4—Présence d'une racine du Ve nerf dans la fosse postérieure
5—Maladie maligne à la face et au cou
6—Lésion de la base du crâne
7—Affections acoustiques
8—Cholestéatomes (tumeurs épithéliales).

C—Lésions Vasculaires

1—Anévrisme de la carotide interne (tumeur sur le trajet de la carotide)
2—Thrombose de l'artère cérébrale postéro-inférieure (formation de caillots)
3—Anévrisme de l'artère basilaire
4—Angiome caverneux autour d'une racine sensitive
5—Irritation de la racine de la fosse postérieure par l'anastomose des artères et des veines.

D—Inflammations

1—Inflammation du ganglion de Gasser
2—Syndrome de Gradenigo (association de douleurs paroxystiques observée dans les mastoïdites trépanées)
3—Cellulite ou angine de Ludwig
4—Abcès buccal ou sub-maxillaire
5—Ostéomyélite ou périostite
6—Empyème du sinus (collection purulente dans le sinus)
7—Myosite du masséter et du temporal (inflammation).

E—Maladies

1—Les multiples scléroses
2—Syphilis
3—Syringobulbie (affection du bulbe).

F—Traumatismes

1—Fracture du crâne
2—Fracture des maxillaires
3—Suite opératoire (extractions).

G—Conditions Diverses

1—Myomes (tumeurs formés par du tissu musculaire)

2—Malformation congénitale du crâne.

Dans ce groupe de névralgies du trijumeau (groupe secondaire), la classification est par elle même très explicative. Elle laisse apparaître les nombreuses conditions pathologiques qui peuvent déterminer la douleur dans le parcours du trijumeau. Ici cependant, nous nous cramponnerons à ce qui nous intéresse en tant que dentistes. Nous porterons une attention soutenue à la première partie de la classification de Glasser, c'est-à-dire celle qui mentionne les conditions dentaires. Quant aux autres, nous les effleurons autant qu'il sera nécessaire ou possible pour laisser ensuite à qui de droit le soin de les approfondir.

Dans la division (A) de sa classification, M. Glasser a cité comme conditions pouvant déterminer la névralgie secondaire:

1—La dentine exposée, ou les caries superficielles.

La dentine exposée peut, en effet, en contact avec la salive, déterminer une certaine hypersensibilité de la dent. Cette sensibilité excessive développe une certaine douleur autour de la dent. Le contact de n'importe quoi suffit à servir de point de départ à la douleur (eau froide, eau chaude, contact de la brosse à dent, etc.) . . . Cela est tout aussi vrai pour les caries superficielles, qui constituent en quelque sorte une zone de moindre résistance, une zone vulnérable. Il n'est pas rare d'observer, dans ces cas, une certaine inflammation du coté de la M.P.D. ou une réaction du coté du cément de la racine, presque toujours accompagnée de douleurs plus ou moins aigües.

2—Anomalie dans l'éruption de la 3è molaire

L'éruption des dents de sagesse s'accompagne parfois d'une douleur intense, sans provoquer le moindre signe d'inflammation locale. Cette douleur a le plus souvent comme cause une simple anomalie.

A) Un simple retard dans la sortie.

B) Manque de place.

Dans ce cas, la 3ème molaire exerce une pression sur la 2ème molaire, au-dessous du niveau de la gencive, détermine ainsi la mise à nu du germe de cette dent et cause de violentes douleurs dont la cause est souvent longue à découvrir.

C) Position des racines.

Par leur élongation naturelle, elles compriment et déplacent les nerfs qui se rendent aux autres dents.

3—Dents incluses:

Elles exercent une certaine pression sur les nerfs, compriment les filets, d'où douleur.

4—Présence de nodule dans la pulpe

Elle provoque la congestion des filets nerveux, des filets sanguins (congestion pulpaire) d'où douleur.

Pour éviter la douleur, il faut donc supprimer toutes ces causes prédisposantes; ce moyen radical est le plus efficace et le plus rapide, qui puisse s'offrir.

Walter E. Dandy (Arch. Surg., 18:687, février 1929) a rapporté une série de cas dans lesquels l'exploration par la voie suboccipitale relèva la présence de conditions pathologiques vasculaires et des adhésions autour de la racine sensitive. Il croît que ces anomalies sont responsables des douleurs de la névralgie du trijumeau.

On rencontre cependant de nombreuses causes extra-craniennes de la névralgie secondaire du trijumeau, qui intéressent les divisions nerveuses périphériques. Beaucoup de ces causes apparaissent facilement en soumettant le malade à un examen minutieux. La thérapeutique peut être alors employée pour extirper la cause première. Dans ces cas particuliers, la douleur est plutôt chronique, ses attaques sont plus longues et moins sévères. La zone "d'excitation" est rare. La douleur est superficielle, lancinante, d'intensité variée, bien limitée sur le parcours du trijumeau. Le patient pourra être soulagé par des injections d'alcool ou par des moyens chirurgicaux.

Topographie de Henry Head

Henry Head divisa les régions de la tête et du cou où les douleurs d'origine dentaire peuvent se faire sentir de la façon suivante:

Dents	*Maxillaire Supérieur*
1 Incisives	Région frontale
2 Canine	Région naso-labiale
3 Première bicuspide	Région naso-labiale
4 Seconde bicuspide	Région temporale ou maxillaire
5 Première molaire	Région maxillaire
6 Seconde molaire	Région mandibulaire
7 3è molaire	Région mandibulaire
Dents	*Maxillaire Inférieur*
8 Incisives	Région mentonnière
9 Canine	Région mentonnière
10 Première bicuspide	Région mentonnière
11 Deuxième bicuspide	Région mentonnière
12 Première molaire	Région mentonnière
13 Deuxième molaire	auriculaire ou à l'angle du maxillaire, la pointe de la langue
14 Troisième molaire	Partie supérieure du larynx

Ces douleurs névralgiques peuvent occuper l'une de ces régions. Elles sont très irrégulières et très variables. Parfois elles viennent du maxillaire supérieur et s'étendent au maxillaire inférieur, dans le région molaire, le nez ou les yeux, et dans les régions frontales ou pariétales. Les douleurs de la névralgie secondaire sont plus extensives que celles de la névralgie essentielle primaire. D'après la topographie d'Henry Head, chaque dent semble avoir une zone sur laquelle elle pourra exercer son influence douloureuse . . .

Nevralgie secondaire: Presentation de cas

Cas I—Au début du mois de février 1948, nous avons traité et renvoyé un de mes compatriotes, qui s'était présenté au département de chirurgie de la Faculté dentaire de l'Université de Montréal pour une consultation concernant une certaine névralgie faciale. Chaque fois qu'arrivait le soir, il était en proie à de violentes douleurs siègeant du côté droit du maxillaire supérieur. Ces douleurs étaient tellement intenses qu'il ne pouvait poser sa tête sur son oreiller. Le contact de l'eau froide augmentait fortement ces douleurs. Les sédatifs n'avaient aucun effet. La seule chose qui le soulageait était quatre ou cinq verres de whisky ou de vin—Une fois ivre mort, il ne sentait plus rien. Cet état de chose durait déjà longtemps quand, un matin, il s'était décidé à aller voir un dentiste. Ce dernier après examen accusa deux dents fortement cariées; leur extraction fut faite. Trois jours après, les mêmes douleurs avaient recommencé. C'est alors qu'il pensa à nous consulter. Nous avons fait l'examen de la bouche. La radiographie a révélé une certaine destruction osseuse autour des racines de la 2è molaire et une zone infectée aux apex de la 3è molaire. Nous avons à notre tour sacrifié ces deux dents . . . Le malade n'est jamais retourné. Il n'avait plus de douleurs. Il pouvait dormir et, partant, il avait discontinué ces verres de boisson et de vin.

La 2è et la 3è molaire étaient donc la cause de ces douleurs.

Cas II—Une jeune femme se présenta, en avril dernier, au département de chirurgie. Elle déclara avoir beaucoup souffert de douleurs dentaires depuis près d'un mois. Cette femme indiqua le maxillaire inférieur comme le siège électif de ses douleurs. L'examen radiographique du maxillaire inférieur n'a rien révélé. Cependant en faisant une deuxième radiographie de toute la bouche, cette fois, nous avons constaté la présence de nodules dans la chambre pulpaire de la 2è bicuspide supérieure gauche et une zone douteuse du coté de la 2è molaire supérieure gauche. Nous avons fait l'extraction de ces dents; la malade était guérie; les dents du maxillaire supérieur étaient la cause de ses douleurs mandibulaires.

Sympathalgies Faciales

Voyons maintenant ce que certains cliniciens appellent sympathalgie et essayons de trouver ce qui permet de différencier ce groupe de la névralgie, dite essentielle, qui a été jusqu'ici l'objet de notre étude.

D'un manière générale, on désigne sous le nom sympathalgie

1) Des algies symptomatiques de lésions du trijumeau avec troubles sensitifs objectifs, soit hémianesthésie, soit anesthésie localisée au territoire du trijumeau.

2) Des algies faciales sympathiques ou algies sympathiques essentielles sans troubles sensitif objectifs.

Dans les deux cas, nous constatons un fait: il s'agit de troubles réflexes ayant pour point de départ une lésion irritative agissant sur le sympathique. La forme la plus typique est celle qui correspond à l'irritation du nerf, soit au niveau du ganglion, soit sur son trajet, soit enfin dans ses centres bulbo-protubérantiels.

On a essayé, il y a de cela longtemps, d'identifier cette forme en soumettant à l'analyse les caractères de la douleur et au cours de laquelle l'accès paroxystique se détachait sur un fond douloureux permanent. Cela a peut-être été une grave erreur, car il arrive très souvent qu'on rencontre ce caractère dans certains cas de névralgies essentielles pures et réciproquement certaines algies symptomatiques prennent le type d'algie essentielle. Par contre, maintenant, on sait la signification pathognomonique indiscutable d'une hypo-esthésie dans le domaine du trijumeau, d'une diminution ou d'une abolition d'un réflexe cornéen ou d'un déficit de la fonction motrice masticatrice. Même dans les cas où la névralgie a tous les caractères d'une variété primitive, l'examen complet est nécessaire car on peut constater, ce qui n'est pas exceptionnel, un de ces signes de déficit et réformer l'impression première qui aurait fait admettre l'existence d'une algie essentielle, si on avait tenu compte du caractère de la douleur. Par exemple, une tumeur du trijumeau peut mettre le clinicien sur une fausse piste dans son diagnostic, car cette tumeur peut se traduire pendant longtemps par une algie d'apparence essentielle primitive.

Lorsque, grâce à un examen minutieux, on arrive à reconnaître la nature symptomatique d'une névralgie, il faut dépister la cause qui peut-être multiple. L'examen peut permettre d'éliminer une épine dentaire, sinusienne ou oculaire; les caractères de la douleur qui diffèrent de celui de la névralgie essentielle suffisent à faire soupçonner l'une ou l'autre de ces affections douloureuses.

Tableau Clinique des algies symptomatiques avec troubles sensitif objectifs

Elles diffèrent de la névralgie essentielle, nous dit M. Dechaume, non seulement par l'existence de troubles sensitifs objectifs, mais encore par leurs caractères: aux élancements névralgiques s'associent des algies sympathiques paratingéminales. Parfois même les manifestations sympathiques sont au premier plan (Thurel).

1) Les douleurs ne sont pas isolées et séparées par des intervalles libres. Elles sont continues, sourdes, exacerbées par la pression du nerf.

2) Les douleurs restent limitées à une ou plusieurs branches ou s'étend à tout le nerf, déborde parfois le territoire du trijumeau.

3) Les douleurs sont moins intenses que dans la névralgie essentielle, mais se manifestent sous une forme contusive avec sensation d'engourdissement.

4) L'abolition du réflexe cornéen précède l'hypothèse cutanée, l'atteinte de la branche motrice détermine une paralysie masticatrice, puis atrophie musculaire.

Diagnostic Etiologique

Les lésions d'ordre mécanique, infectieux ou toxique suffisent à servir de point de départ à ces algies.

1) Les lésions d'ordre mécanique: Elles peuvent intéresser les branches périphériques. Elles sont le plus souvent déterminées par un traumatisme, par une compression.

2) Ces lésions peuvent également intéresser le ganglion de Gasser ou la racine du trijumeau. Elles ont pour cause soit un traumatisme accidentel ou opératoire, par exemple, la neurotomie rétro-gassérienne, soit une compression: syndrome de Gradenigo (otite compliquée d'oséite de la pointe du rocher) syndrome Gassérien (tumeur du ganglion) (M. Dechaume).

3) On peut avoir encore des lésions du noyeau sensitif du trijumeau provoquées par des lésions vasculaires, ou des tumeurs.

LESIONS INFECTUEUSES OU TOXIQUES

a) Infectueuses: zona, syphilis, tuberculose, paludisme, sclérose en plaque, infections neurotropes.

b) Toxiques: diabète.

TABLEAU CLINIQUE DES ALGIES FACIALES SYMPATIQUES SANS TROUBLES SENSITIFS OBJECTIFS

"Indépendantes de toute atteinte trigéminale, elles peuvent être réflexes d'origine, ayant pour point de départ une lésion irritative périphérique; mais souvent elles sont primitives et mériteraient le nom d'algies faciales essentielles." (Thurel).

1—Douleurs continues ou par crises de plus ou moins longue durée avec enforcement à progression et à digression lentes. Douleurs dépassant la sphère du trijumeau du même côté. Douleurs sourdes contusives, difficiles à définir, véritable causalgie.

2—Au moment des paroxysmes, elles s'accompagnent de troubles vasomoteurs importants, les troubles sécrétoires sont rares; elles s'accompagnent de nausées et de vomissements.

Diagnostic:

On doit éviter de prendre des lésions secondaires ou con-comitantes pour des lésions causales et procéder à des interventions inutiles (extractions des dents saines sur lesquelles se projette la douleur).

Diagnostic étiologique:

Toute lésion périphérique irritant les terminaisons nerveuses du trijumeau:

1) Stomatites, cancer de la langue
2) Affections gingivo-dentaires
3) Affections nasales
4) Affections oculaires
5) Affections auriculaires
6) Face: factures, traumatisme.

Traitement:

Le traitement est décevant. Hagueneau nous dit qu'il ne faut pas d'injections neurolytiques ou d'interventions directes, ni d'opium. En dehors du traitement étiologique, il est recommandable de conseiller le repos au malade; on peut essayer de modifier le terrain par un traitement général génatrophique, thérapeutique anti-anaphylactique ou anti-collaïdoclasique, opothérapie, ou bien encore agir directement sur le système neuro-végétatif céphalique: sédatifs du système nerveux (cromare, valériane, dérivés barbituriques, traitement physiothérapiques, surtout radiothérapie; réflexothérapie (ganglion sphéno-palatin).

ALGIES FACIALES OTYPIQUES

Certaines douleurs embrassant la face, la tête ou le cou ne répondant pas cependant aux douleurs types observées dans la névralgie dite essentielle sont appelées névralgies atypiques de la face. Nous allons dans cette partie de notre sujet les étudier à fond et montrer qu'elles sont distinctes de la névralgie essentielle, avec laquelle on a une tendance à les confondre. Rien de précis n'est connu au sujet de leur cause; elles suivent d'ordinaire un traumatisme ou des infections provenant d'une influenza ou un rhume, etc. La plupart du temps ces douleurs peuvent être de caractère psychogénique. Bien qu'elles puissent apparaître à n'importe quel moment, elles semblent cependant être plus fréquentes vers le milieu de la vie (45-50 ans).

Elles peuvent intéresser une zone limitée de la face, mais souvent leur topographie est plus étendue, occupant d'emblée deux branches du trijumeau, s'étendant aux territoires voisins cervicaux ou occipitaux, ou diffusant même vers le côté opposé. La douleur emprunte plus ou moins complètement les caractères des algies dites sympathiques, que nous avons rappelées déjà: la sensation de brûlure domine, des réactions vaso-motrices accompagnent les accès. On a même décrit certains syndromes appartenant au ganglion sphéno-palatin ou au ganglion ciliaire.

On peut grouper les algies atypiques en trois variétés:

1ère Variété:

L'une d'entr'elles se rapproche de la névralgie essentielle par ses caractères. Les crises douloureuses sont, comme

dans la névralgie essentielle, intermittentes, mais on remarque soit des sensations causalgiques, soit des réactions vaso-motrices ou sécrétoires pendant les accès. Dans ces cas, les manifestations sympathiques sont secondaires.

2ème Variété:

Dans la seconde variété, on observe une sensation de brûlure, de constriction ou de pulsation qui constitue le fond permanent, le caractère dominant de la douleur. Mais sa topographie est fixe et bien déterminée. Les accès sont marqués d'accentuations fulgurantes qu'on peut aisément méconnaître si on n'examine et n'interroge pas avec soin le malade; car il extériorise surtout les traits sympathiques de sa douleur. Ce type douloureux appartient généralement au groupe des névralgies symptomatiques et s'observe surtout après les traumatismes frontaux ou malaires.

3ème Variété:

La troisième variété, lorsqu'elle est typique, se manifeste sous forme de sensation de cuisson, de douleurs pulsatiles irradiantes et angoissantes qui augmentent en accès, se dégageant mal d'un fond douloureux permanent. C'est cette forme qui répond à la description des algies sympathiques de la face.

De ces trois types, les deux premiers doivent être intégrés dans la névralgie du trijumeau; l'existence de paroxymes nets ou lavés en est le trait clinique dominant; l'épreuve thérapeutique confirme cette intégration, puisque la douleur cède à la neurotomie ou même à la neurolyse dans certaines formes périphériques.

La 3ème variété, par contre, n'est pas atténuée par la section du trijumeau; elle ne cède d'ailleurs pas non plus aux interventions médicales ou chirurgicales portant sur le sympathique cervical. Certaines de ces douleurs s'effacent après anesthésie du ganglion sphéno-palatin, mais inconstamment. De telles algies ne sont pas sans analogie avec les douleurs du zona et on peut se demander s'il ne convient pas d'incriminer à leur origine une altération de la cellule du deutoneurone sensitif, par analogie avec l'algie Zostérienne. (Sem. Hop. Paris.)

Pour différencier la névralgie essentielle de la névralgie atypique d'origine dentaire, on emploie l'anesthésie locale.

Si pendant une attaque, on anesthésie la zone dans laquelle s'étend la douleur et qu'on arrive ainsi à la suppression de la douleur pendant quelques heures, on peut alors affirmer que la cause se trouve dans cette région.

Les Psychalgies:

Ce ne sont pas à proprement parler des douleurs, mais des sensations désagréables: sensation d'épaississement ou de rétraction de la peau, hypersensibilité cutanée extrême si bien qu'un courant d'air ou même un simple deplacement d'air est ressenti de façon désagréable.

Les malades décrivent leurs douleurs, non seulement en raison de l'interprétation qu'ils en tirent: rétrécissement des orifices palpébraux, du nez, de la bouche pouvant entrainer de graves conséquences.

Contrastant avec les plaintes incessantes des malades, qui utilisent pour traduire leurs sensations, les adjectifs et adverbes les plus impressionnants, on est frappé par le calme apparent du visage, par l'absence de réactions associées.

Les pyschalgies faciales sont toujours bilatérales, mais impossibles à délimiter en surface et en profondeur. Elles sont rarement isolées, associées d'ordinaire à d'autres phychalgies disséminées par tout le corps en particulier à des cénesthopagies viscérales. Les conditions d'apparition des psychalgies sont les mêmes que celles des idées fixes, des obsessions.

Ces malades sont des mentaux, des inquiets, des anxieux, des obsédés. Il faut pas abandonner ces malades à eux-mêmes. L'action constitue, pourvu qu'elle ne soit pas intempestive, la meilleure psychothérapie (Thurel).

Comme on le voit bien cette forme d'algie est typique dans son genre. Elle ne se rapproche en rien de la névralgie essentielle. Elle s'isole d'elle-même de la nevralgie du trijumeau.

En conclusion, nous disons que la névralgie du trijumeau est différente de toutes les autres algies faciales.

1—Par ses caractères propres
2—Par son évolution
3—Par son traitement.

Nous ignorons la cause de cette entité morbide, mais nous pouvons affirmer, en absence de tout signe objectif, que le trijumeau n'est la siège d'aucune lésion organique. "La névralgie du trijumeau est un trouble fonctionnel." On ne peut la confondre avec les autres car elles ne répondent pas aux mêmes descriptions. "Elle est une maladie de l'âge mûr, ne s'observant guère avant la quarantaine, elle fait partie du bagage pathologique de la famille neuro-arthritique et s'intrique d'ailleurs, volontiers, avec d'autres manifestations morbides, en particulier avec l'asthme et avec la migraine, mais nous ignorons son étiologie."

BIBLIOGRAPHIE

J. Guillaume et G. Mozar—"Les névralgies localisées", Rev. de Neurologie, F. 77, 1945

G. Sigwald et J. Guillaume—"Névralgies méningées paroxystiques guéries chirurgicalement", Rev. de Neurologie, F.77, 1946

"Semaine des Hôpitaux de Paris", 2 oct. 1947, no 39

Glasser, M. A.—"Treatment of Trigeminal Neuralgia with Trichlorétylène", J.A.M.A., 96, 916,920, mars 21, 1941

Glasser, M. A.—"Facial Neuralgia, its Etiology and Treatment", J.A.D.A., vol. 26, sept. 1939

Dandy, Walter E.—"Operation for Cure of Tic Douloureux: Partial Section of Sensory Root of Pons", Arch. Surgery, février 1929

Apiller, G. W. and Frazier, C. H.—"Division of Sensory Root of Trigeminal for Relief of Tic Douloureux", U. Penn. Med. Bull., 14, 345, 1901

Bell, Charles—"Nervous System, Ed. 3, London 1844

Printz and Greenbaum — "Diseases of the Mouth and their Treatment", 1935, pp. 520-531

Blair and Ivy—"Essentials of Oral Surgery", Ed. 2, 1936

Michel Dechaume—"Précis de Stomatologie", édit. 1934

Garretson, James E.—"A System of Oral Surgery", 1873, pp. 709-755

Dental Items of Interest, vol. 64, 1942

Adson, A. W.—"Surgical Treatment of Glossopharyngeal Neuralgia", Arch. Neur. and Psychiatry, Nov. 1947

Nogué, R.—"Maladies de la bouche", Paris, J. B. Baillière et fils, 1924

Zinsser F.—"Diseases of the Mouth", New York, 1912

Coadby, K.—"Diseases of the Gums and the Oral Mucous Membrane", Ed. 4, London, et New York, Oxford Medical Publications, 1931

Rousseau, Jecelle et Raison—"Pathologie Buccale", Paris, Masson et Cie, 1933

Mead, S. V.—"Diseases of the Mouth", Ed. 4, C. V. Mosby, 1932

Fitzwilliams, D.C.L.—"The Tongue and its Diseases"

Flagg, Foster J.—"Dental Pathology"

Nouvelle arme contre la carie dentaire

La cause exacte de la carie dentaire a toujours échappé aux dentistes. Récemment des chercheurs ont fait porter leurs soupçons sur le "lactobacillus acidophilus", une bactérie, qui se trouve dans la salive. Jusqu'à maintenant, l'arme la plus efficace trouvée contre ce microbe, qui attaque la dent par l'extérieur, est le fluorure, qui est incorporé dans l'émail des dents, à leur formation.

La semaine dernière, une organisation, sans but lucratif, appelée la Eastern Graduate Research Foundation, a déclenché une campagne contre le "lactobacillus" et un programme d'action est réparti sur une période de troit années. Leur nouvelle arme est une poudre dentifrice, contenant un phosphate d'ammonium dibasique (un composé synthétique d'azote). Cette poudre est supposée détruire les plaques dentaires, nuire à la profilération des bactéries et neutraliser les acides sécrétés par le "lactobacillus". Dans des expériences préliminaires, on prétend avoir abaissé le taux de la carie dans une proportion de 35%.

Comme sujets d'expérience, cet organisme, en collaboration avec la Cie Poloris, qui fabrique une poudre contenant de l'ammoniaque (Amm-i-dent), a choisi les enfants d'école de la ville de Mahopac, N.Y. (pop. 1,109). Quelques 500 écoliers, des maternelles jusqu'à la dixième année, brosseront leurs dents, deux fois par jour, avec Amm-i-dent. Des radiographies gratuites et des examens périodoques donneront les renseignements requis pour l'expérience. Les promoteurs de cette expérience espèrent que cette nouvelle poudre va bien agir contre la carie dentaire, nonobstant l'âge de la personne.

Dans le monde dentaire

Renseignements sur l'impôt sur le revenu.

Rapports trimestriels

Les personnes, dont les revenus, a) proviennent d'une entreprise ou d'une profession (autre qu'une ferme); b) proviennent de placements; c) proviennent dans une proportion supérieure à 25% de sources autres qu'un salaire ou des gages, sont tenus de payer leur impôt annuel à tous les trois mois, durant l'année courante. Chaque acompte doit être expédié avec la formule Forme T-7-B (Individus). Toute solde d'impôt est payable avec les intérêts, en utilisant la formule T-1, qui doit être remplie avant ou le 30 avril de l'année suivante.

La cédule suivante montre les remises requises durant 1949.

a) Pour les dentistes ne recevant pas de salaire représentant les ¾ de leur revenu:

Dates des remises	*Formules devant être utilisées*
le 31 mars, 1949	T-7-B-Individus, 1949
le 30 avril, 1949	T-1-Générale, 1948
le 30 juin, 1949	T-7-B-Individus, 1949
le 30 sept., 1949	T-7-B-Individus, 1949
le 31 déc., 1949	T-7-B-Individus, 1949

b) Pour les dentistes percevant des salaires représentant les ¾ ou plus de leur revenu:

Dates des remises	*Formules devant être utilisées*
le 30 avril, 1949	T-1-Générale, 1948
Quand le status change	T-D-1

Les dentistes, qui paient des salaires à leurs propres employés, devraient faire parvenir la formule T-4 à la fin de février, de chaque année.

Pour renseigner la profession dentaire et pour rendre les rapports de l'Impôt sur le Revenu au Ministère du Revenu National, plus uniformes, les remarques suivantes sont soumises et devraient être suivies:

Revenu:

1) Tout dentiste doit tenir des livres, indiquant clairement et d'une façon précise les revenus provenant de l'exercice de sa profession et de ses autres placements. La tenue des livres doit être simple et correspondre aux rapports de l'impôt. Les entrées doivent être faites dans des livres "ad hoc".

Dépenses

2) Sous la rubrique des dépenses, les items suivants doivent être enrégistrés et ces dossiers doivent correspondre aux allégués faits dans les rapports:

(a) Fournitures et équipement dentaires;

(b) Employés de bureau, assistante, servante, comptable; blanchisserie et primes d'assurances contre les risques professionnels. (Il est à noter que la Loi de Guerre de l'Impôt sur le Revenu ne tolère pas comme déduction un salaire payé à sa femme par son mari ou vice versa. De telles sommes, si payées, doivent être réajoutées au revenu);

(c) Téléphone;

(d) Honoraires d'assistance;

Les noms et adresses des assistants, qui reçoivent des salaires, doivent être fournis le ou avant le dernier jour de février, de chaque année, sur la formule T-4, qui peut être obtenue de l'Inspecteur de l'Impôt sur le Revenu. (Il ne faut pas confondre cette formule avec la formule T-1, utilisée par les particuliers et qui est expédiée le ou avant le 30 avril de chaque année);

(e) Loyers;

Le nom et l'adresse du propriétaire (de préférence) ou le nom de l'agent qui administre la propriété. (voir (h));

(f) Timbres-poste et papeterie;

(g) Dépréciation sur équipement;

Les taux suivants seront alloués à condition que la dépréciation totale allouée jusqu'à ce jour, n'ait pas complètement atteint le sommet de la valeur:—

Instruments — Les instruments coûtant $50.00 ou moins peuvent être considérés comme des dépenses et soustraits comme déboursés de l'année courante;

Les instruments coûtant plus de $50.00 ne peuvent pas être considérés comme des dépenses courantes de l'année, mais comme des dépenses capitalisables; ces instruments peuvent être dépréciés à un taux variant entre 15% et 25% basé sur sa durée, et sa nature; cette estimation peut se faire entre le praticien et sa Division de l'Impôt. Quand il y a eu entente, cette dépréciation doit être le même toutes les années suivantes;

Ameublement de bureau et accessoires — 10% par année;

(h) Dépenses proportionnelles des dentistes exerçant dans leur demeure—

(a) dont ils sont les propriétaires;

Quand un dentiste pratique dans une maison, qu'il possède et qu'il habite, une somme pourra être allouée comme dépense proportionnelle au tout, c.-à-d; pourra être basée sur l'espace total de la maison en rapport avec l'espace occupé par le cabinet, le laboratoire, la salle d'attente, etc. Ces dépenses couvrent les taxes, l'éclairage, le chauffage, les assurances, les réparations, la dépréciation et les intérêts sur l'hypothèque (le nom et l'adresse de la personne, qui détient l'hypothèque devront être fournis);

(b) louée par le dentiste;

Le loyer seulement sera proportionnel, en autant que le propriétaire paye les autres dépenses de la maison.

Les allocations ci-dessus ne doivent pas excéder le tiers des dépenses totales de la maison ou du loyer, à moins qu'on soit en mesure de prouver qu'une plus grande allocation doit être faite pour l'exercice de sa profession.

(i) Autres dépenses (non classifiées ailleurs);

Les déboursés chargés dans cette rubrique doivent pouvoir être prouvés et circonstanciés dans les livres.

Les déboursés faits pour la charité ne doivent pas dépasser 10% du revenu net et les reçus doivent être fournis au Département de l'Impôt. Ceci est une spécification de la Loi.

Les cotisations annuelles payées aux organisations dentaires, permettant l'exercice de la profession, et aux sociétés dentaires ne doivent pas dépasser $75.00. Elles doivent être mentionées dans le rapport.

Les déboursés faits pour suivre des cours post-scolaires ou des congrès dentaires ne peuvent être déduits comme dépenses.

(j) Dépenses d'intérêts;

Les frais d'intérêts payés sur des emprunts faits sur des valeurs, comme valeurs collatérales, peuvent être déduites des revenus de placements et non du revenu professionnel.

(k) Les taxes d'affaires sont allouées comme dépenses, mais les impôts sur le revenu ne peuvent l'être.

(l) Dépenses d'automobiles;

Les frais de taxi, faits dans des buts professionnels, peuvent être considérés comme dépenses. Les dépenses, comprenant la dépréciation, d'un automobile personnel ne peuvent être considérées comme dépenses.

(m) A partir de janvier 1948, les déboursés raisonnables faits par les membres de la profession dentaire pour suivre des congrès professionnels peuvent être déduits du revenu professionnel pour fins d'Impôt sur le Revenu:

1) Un Congrès, par année, de l'Association Dentaire Canadienne.
2) Un Congrès, par année, d'une Association Dentaire Provinciale.
3) Un Congrès, par année, d'une Société Dentaire ou d'une Association de Spécialistes, au Canada ou aux Etats-Unis.

Les dépenses permises doivent être raisonnables et doivent être itémisées, c.-à-d., que le dentiste devrait indiquer (1) la date du Congrès, (2) le nombre de jours présents, avec preuves à l'appui données officiellement par le groupement, qui organise le réunion, (3) les dépenses encourues, en divisant (a) les dépenses de transport, (b) les repas et (c) les frais d'hôtel, pour lesquelles dépenses, on devrait garder les reçus pour les produire sur demande.

Aucune de ces dépenses ne peuvent être déduites d'un revenu provenant de salaire, puisqu'il en est fait mention expressément dans la loi.

Dentistes salariés

3) Un salaire est considéré comme revenu "net" par l'Impôt sur le Revenu. Le salaire d'un dentiste est donc imposable en totalité, sans déduction pour des cotisations payées aux organisations, qui lui permettent de pratiquer, ou d'autres dépenses du même genre. Si le contrat avec son employeur assume paiement de cette cotisation à celui-ci, celui-ci pourra déduire cette cotisation de son revenu, en plus des déboursés, qu'il fait pour le salaire de ce dentiste.

(Un amendement récent spécifie que les employés, qui doivent payer une cotisation à une organisation pour leur permettre, en loi, d'exercer leur occupation, peuvent déduire ces honoraires de leur revenu. Cet amendment s'applique aux dentistes salariés, qui peuvent donc soustraire le montant de leur cotisation annuelle au Collège provincial de leur revenu).

Considérations

Pour répondre aux nombreuses demandes de renseignements, en ce qui a trait aux dé-

ductions allouées pour les dépenses d'assistance aux congrès dentaires, les remarques suivantes doivent être considérées.

Les praticiens généraux peuvent déduire de leur revenu deux Congrès, où on s'est inscrit, durant 1948, qui doivent être (1) un Congrès de l'Association Dentaire Canadienne et (2) un Congrès d'une Association Provinciale.

Les spécialistes, reconnus dans un spécialité officielle en dentisterie, peuvent déduire, en plus, des dépenses encourues pour une réunion de ces spécialistes aux Etats-Unis ou au Canada.

Le certificat de présence émis par le secrétaire de l'association, qui a organisé ce Congrès doit accompagner le rapport d'impôt pour se prévaloir de ces déductions. Les reçus des dépenses de cette réunion doivent être conservés par le dentiste pour les produire au besoin.

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Réunion de la "Western Canada Dental Nurses' et Dental Assistants' Society"

Conjointement avec la réunion annuelle de l'A.D.C., cette association tiendra son congrès dont le programme est le suivant:

dimanche, le 5 juin 1949

2.00 hrs à 7.00 p.m.: Enrégistrement.
8.30 hrs ..... Réception.

lundi, le 6 juin

9.00 hrs a.m.: Discours de réception.
10.00 à 11.30 hrs a.m.: Réunion des comités de la Société.
12.00 a.m. à 1.45 p.m.: Diner et conférence, gracieuseté de la Cie Ash-Temple.
2.00 à 3.15 hrs p.m.: Clinique.
3.30 à 4.45 hrs p.m.: Conférence.
5.00 à 6.00 hrs p.m.: Exhibits et cinéma.
9.00 à ..... Réception

mardi, le 7 juin 1949

9.00 à 10.15 hrs a.m.: Conférence.
10.30 à 11.45 hrs a.m.: Réunion de comités.
12.00 à 1.45 hrs p.m.: Diner et conférencier, gracieuseté de Denco (Western).
2.00 à 3.15 hrs p.m.: Conférence.
3.30 à 4.30 hrs p.m.: Clinicien.
6.30 à ..... Banquet et danse.

mercredi, le 8 juin 1949

9.30 hrs a.m.: Réception au déjeuner.
2.00 à 315 hrs p.m.: Conférence.

Toute communication doit être adressée à Madame Thelma Gourlay, secrétaire de la Société des assistantes dentaires de Saskatoon, aux soins du Docteur F. R. Smith, 606 Edifice Canada, Saskatoon, Saskatchewan.

L'inscription des étudiants en Chirurgie Dentaire au Canada pour 1948-49

Les chiffres de l'inscription des étudiants aux facultés de Chirurgie Dentaire des Universités canadiennes montrent une augmentation de 90 élèves sur le nombre rapporté l'an dernier. Le nombre total des étudiants (1012) est le plus élevé à date dans les annales de notre profession. Ce chiffre peut être le plus élevé, qui sera atteint pour plusieurs années à venir, parce que les écoles dentaires admettent maintenant des classes de volume normal.

Le nombre approximatif des diplômés, en 1949, sera de 180. De plus, des sujets canadiens, en petit nombre, recevront leurs diplômes d'Universités américaines, spécialement des résidents de Colombie Britannique. Par conséquent, le nombre total des additions au sein de notre profession sera d'environ 190. En comparaison, le nombre des pertes, par la mort ou les retraites, s'établit comme suit pour ces dernières années: 1945—93; 1946—147; 1947—176.

Les diplômés, durant 1948, se sont chiffrés à 99, le plus petit nombre depuis 1941. Cet état de choses est dû au fait que l'Université de Toronto n'avait pas de classe de finissants régulière, à cause du plan accéléré d'études établi durant la guerre. De ces 99 diplômés, un était une femme.

Quatre des cinq écoles ont à l'étude le projet d'établir une école d'hygiénistes dentaires.

PAGES EDITORIALES

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Articles traitant de dentisterie publiés dans les revues

Depuis quelque temps, le public peut lire des articles traitant de phases diverses de notre profession dans les journaux et les revues. La plupart du temps, ces articles parlent des solutions de fluor. L'effet de ces écrits profanes est d'exagérer dans l'esprit du public l'efficacité du fluor comme traitement préventif. L'interprétation de rapports scientifiques sur ce sujet est fait de façon à faire croire que quelques applications de fluor suffisent à conserver les dents, sans qu'il soit besoin d'y apporter d'autres soins, dans l'avenir. De plus, les membres de notre profession sont accusés d'égoisme, en refusant de prodiguer ce traitement, qui les priverait de leur gagne-pain. Des incidents du même genre se sont produits dans d'autres domaines s'occupant de la santé et, probablement, le temps et l'expérience seront les seuls facteurs qui ramèneront à un juste milieu l'opinion publique.

Les dentistes peuvent s'attendre à un nouvel émoi dans le public à la suite d'un article publié dans la revue Collier's, livraison du 8 janvier dernier.

> "Cet article traite la théorie du Dr Bernard Gottlieb sur les causes de la carie et sur son "traitement d'imprégnation comme mesure préventive". Des recherches futures détermineront la véracité ou la fausseté de cette méthode et des preuves présentées à l'appui de l'efficacité de ce traitement. Mais il est regrettable qu'une publicité nationale soit faite autour d'un traitement préventif supporté par si peu d'évidence scientifique. Les avancés faits dans la revue Collier's sont prouvés par des recherches faites, dans un cas, sur un groupe de 58 enfants, avec 12 enfants comme groupe de contrôle et dans l'autre cas, sur un groupe de seulement 42 enfants.
>
> L'attitude de la majorité des chercheurs dentaires a été exprimée, sans aucun doute, par le Conseil des Médicaments Dentaires dans un rapport publié dans la livraison de janvier du Journal de l'Association Dentaire Américaine (page 147). Le Conseil donnait l'opinion suivante: "En autant que le Conseil est concerné,

l'efficacité des solutions, qui ont été suggérées pour imprégner les dents, n'a jamais été établie."

Personne ne peut être blâmé pour rechercher toutes les possibilitées de prévenir la carie dentaire. Le docteur Gottlieb et ses assistants et tous les autres chercheurs devraient être encouragés à poursuivre des travaux sur cette théorie de Gottlieb et le traitement d'imprégnation qu'elle comporte. Mais il faut aussi que l'intérêt du public soit sauvegardé, en ne recommandant que des traitements approuvés par des compétences après des expériences poussées et déclarés efficaces."

Deux autres périodiques populaires présentent à leurs lecteurs des articles bourrés de demi-vérités, qui placent la profession dentaire dans une position ambigüe.

La livraison de janvier de la revue Cosmopolitan tente d'exposer des renseignements "sensationnels" sur l'exercice de la profession de dentiste. L'article est basé sur des différences de diagnostic pour le même patient, par différents dentistes, et aussi sur la diversité des honoraires pour les mêmes soins. L'auteur souligne le grand nombre de patients, qui se font écorcher par leurs dentistes.

Mais il oublie de dire que tout individu, dentiste y compris, doit se servir de son propre jugement; que les dentistes se servent de méthodes de diagnostic différentes et que leurs techniques sont variées.

La livraison de février de New Liberty présente à ses lecteurs une nouvelle, qui renferme plusieurs omissions de faits et qui laisse croire au public une apathie de la part de la profession dentaire envers les enfants.

Lettre aux Gouverneurs de l'A.D.C., vol. 5, no 8.

Congrès de la Société Dentaire de Montréal Vingt-cinquième Anniversaire

En raison du 25ième anniversaire de la Société Dentaire de Montréal, le grand congrès des 2-3-4 juin remplacera, cette année, les Journées Dentaires annuelles de la Société. Le programme complet de ce congrès paraîtra dans le prochain numéro du Journal.

Retenez bien les dates: 2-3-4 juin 1949.

Cours post-scolaires à l'Université de Montréal

Les derniers cours post-scolaires, offerts par la faculté de Chirurgie Dentaire de l'Université de Montréal, durant l'année académique 1948-1949, sont les suivants:

ENDODONTIE ..... **du 2 au 7 mai 1949**
ORTHODONTIE ..... **du 23 au 28 mai 1949**

Toutes les demandes de renseignements doivent être adressées au Doyen, Faculté de Chirurgie Dentaire, Université de Montréal, 2900 Boul. Mont-Royal, Montréal.

Photo by Dr. M. L. Simon, Montreal, Que.

CANADIAN DENTAL ASSOCIATION CONVENTION
AT MURRAY BAY, QUE., JUNE, 1948

Lord, let me never tag a moral to a tale, nor tell a story without a meaning. Make me respect my material so much that I dare not slight my work.

Help me to deal very honestly with words and with people, for they are both alive. Show me that as in a river, so in a writing, clearness is the best quality, and a little that is pure is worth more than much that is mixed.

Teach me to see the local colour without being blind to the inner light.

Give me an ideal that will stand the strain of weaving into human stuff on the loom of the real.

Keep me from caring more for books than for folks, for art than for life.

Steady me to do the full stint of work as well as I can; and when that is done, stop me; pay what wages Thou wilt, and help me to say, from a quiet heart, a grateful Amen.—Henry van Dyke.

DR. EPHREM VINET, D.D.S., L.C.D.,
Montreal, Quebec.

President of the College of Dental Surgeons of the Province of Quebec.

Chairman of the Committee on Illegal Practice.

Secretary-Treasurer of the Dental Hygiene League of the Province of Quebec.

Past President of the Association des Chirurgiens-Dentistes de Langue Française de l'Amérique du Nord.

Former Clinician in the Surgery Department of the Faculty of Dental Surgery of the Université de Montréal.

The Journal
OF THE CANADIAN DENTAL ASSOCIATION

VOL. 15 TORONTO, MAY, 1949 No. 5

DENTAL CARE FOR CANADA'S CHILDREN*

by HON. PAUL MARTIN, Minister of National Health and Welfare

Children's Dental Health Day In Ottawa

DENTAL health care should start with the child. In the past too little attention has been given to stopping dental decay in children and too little effort has been made to train them in caring for their teeth. It is prevention—and this means *early* prevention—and in research that we must expect our greatest advances toward dental health. In these advances, we can confidently look for leadership to the Canadian dentists.

In organizing this Children's Dental Health Day, the Ottawa Dental Society and the Ottawa Dental Public Health Committee have performed an outstanding act of citizenship shared by the Ottawa Superfluity Shop and those public-spirited men and women who are helping to support this new departure. It is a privilege to address this luncheon meeting. I feel that I am taking part in an event that will help to develop nationwide interest in this vitally important phase of child health.

The problem of dental disease is one of considerable magnitude. In an average community tooth decay is more prevalent than any other disease. The sensible way to attack this problem is to ensure that everyone receives the best of dental care. While we know this to be important as many as three-quarters of our citizens neglect it. Too often it is the old story of "too little and too late"—especially for Canada's children. *Yet it is during the years of childhood that the fight for dental health must be won if we are to become dentally fit as a nation.*

As dental health care is closely related to general health, every new health advance is important to members of your profession. I should like to talk particularly of those advances in dental health that have come through the National Health Program which makes $30,000,000 or more each year available in support of provincial health services.

Dentistry In The National Health Program

Today I shall outline for you some of the ways in which the National Health Program is serving and will serve to advance dental health care in Canada.

(a) *Surveying the Dental Problem*

The health surveys that are now underway in every province will tell us more about the extent of the dental problem in Canada and about the distribution and adequacy of our dental services. In these surveys I have no doubt that full account is being taken of needs for additional public health dentistry. A good deal of fact-finding is necessary if we are to plan and

*Condensed version of an address to the Children's Dental Health Day Luncheon, March 14, 1949, at Chateau Laurier, Ottawa.

organize better dental health programs. It is interesting to note that in at least two provinces, Nova Scotia and Saskatchewan, these health surveys include studies of the dental needs of children in rural areas.

(b) Training of Dentists

In Canadian dentistry at the present time there are no more than a dozen dentists who have been professionally trained in public health. However, the Professional Training Grant is helping to improve the supply of suitably trained dental personnel. For example, two dentists from Ontario and one from New Brunswick are taking a ten-month course in dental public health. They are among the 537 health workers for whom training has already been approved under the National Health Program. Undoubtedly, as the federal grants open new possibilities for service in public health dentistry, more members of your profession will be attracted into this important field of service.

The simple fact is that Canada does not have enough dentists. The ratio of about 1 to every 3,000 persons is so low that if more people who need dental care ask for it the demand would far exceed the capacity of the profession. Besides training more dentists and supplementing their services with qualified dental hygienists, we must count on preventive dentistry to bring the dental problem under better control. The maldistribution of dentists serves further to aggravate this problem. More than 40% of Canadian dentists are located in Ontario and almost half of these practise in the greater Toronto area. There is a serious shortage of dentists in other provinces. In Saskatchewan, for example, there are only 192 or about 1 for every 4,500 people, and even then more than half of these practise in six centres. The federal grants, by increasing the number of dentists in public health work, can partly correct this maldistribution from province to province and between rural and urban areas.

(c) Research in Dental Public Health

No long-term solution can be found for decay unless we discover more about its causes and perfect our preventive techniques. Research is therefore of basic importance. The federal grant for Public Health Research brings $100,000 this year and up to $500,000 in later years to supplement health research expenditures already at record levels in Canada.

Only a few weeks ago, the Faculty of Dentistry at the University of Toronto, with funds provided through this grant, began a scientific study of the effects of the application of sodium fluoride on children's teeth. There is already evidence to show that such applications to a child's teeth over a period of years often materially reduce the degree of tooth decay. Another study of particular interest in child dental care is the survey being made of 8,000 school children in British Columbia to determine the value of a simplified system for gathering health and welfare data for each child. A survey of the extent of illness in a typical Canadian community near Toronto is keeping track of the dental work required by people of all ages.

In addition to these projects, for three and one-half years the Department of National Health and Welfare, through its Dental Health and Research Divisions, has been studying the effect of fluorine in public water supplies on the incidence of tooth decay. Working in close cooperation with us in this project are the Ontario Department of Health, the health authorities of the City of Brantford—where the study of some 1,800 children has been undertaken—together with the health authorities in the cities of Stratford and Sarnia, in which "control" groups for the Brantford experiment have been set up. The officers of the Dental Health Division report that while the evidence is still not conclusive, *there are signs which lead us to be cautiously optimistic about the value of water fluorination for partially controlling tooth decay.*

The final results of this study and of the one recently undertaken on sodium fluoride by the University of Toronto may serve vastly to increase our power to control tooth decay. It should, however, be clearly understood that such measures cannot substitute in any way for timely dental health services for the child. Rather it is hoped their effect will be complementary, in helping to reduce the almost staggering accumulation of dental defects now found in children of school age.

(*d*) *Development of Dental Public Health*

The federal grant for General Public Health, which stands this year at $4,395,000, provides also for considerable expansion of preventive dentistry. For example, within the past few months steps have been taken to organize Divisions of Dental Hygiene in the Provincial Health Departments of New Brunswick, Saskatchewan and British Columbia. In two more provinces similar divisions are being planned. This will lead to the more energetic development of preventive dental health programs in all these provinces, which naturally will place emphasis on preventive dentistry for children. In British Columbia, a province-wide preventive dental program is being organized and two additional dental clinics for Greater Vancouver are being equipped and staffed under the federal grant for Public Health. In Quebec, the grant is being used to extend mobile dental health services for the Province's Protestant schools. As part of the development of a program of education and preventive dental hygiene in New Brunswick, a dental clinic is being established near Saint John.

A particularly notable development under this grant is the expansion of dental service for pre-school children in the rural areas of Saskatchewan. Hospital and other medical centres in the rural areas are being provided with six fully equipped dental clinics. Four stationary and seven mobile dental units are being fully equipped to work in the various health regions and bring better dental services to 40,000 or more children of pre-school age. One of the mobile units will use sodium fluoride in its preventive work. Better dental service will also be made available for pre-school children in Saskatoon by the appointment of a second dentist and the purchase of x-ray equipment. The value of all these projects in better dental care for the children of Saskatchewan cannot be overestimated.

(*e*) *Dental Care for Crippled Children*

The federal grant to help prevent crippling conditions in children, and to assist with the provision of diagnostic and treatment facilities, makes an annual sum of $500,000 available to the provinces. I am sure that preventive dentistry, especially for the crippling and often disfiguring conditions of malocclusion, will be among the many useful activities which this grant will make possible.

(*f*) The Detection of Cancer

Other grants under the National Health Program are less obviously connected with the provision of better dental health, but almost every grant has some significance for preventive and curative dentistry. The Cancer Control Grant, for example, will serve to intensify all Canadian campaigns against this scourge. In cancer control activity the dentist has an important role because he can become increasingly aware of early evidences of cancer in and around the mouth, where perhaps one-tenth of cancer cases originate.

(*g*) *Dental Care For Hospital Patients*

The grant for Tuberculosis Control has already been applied in part to dental projects. It is only reasonable that for any patient undergoing treatment for tuberculosis or for any other disease, dental health care should not be neglected. In Quebec, equipment is being purchased for dental clinics at three sanatoria. Dental x-ray equipment is being added to the Central Al-

berta X-ray Sanatorium and dental equipment is being provided for a sanatorium in New Brunswick.

The grant for Mental Health can also assist the provinces in taking account of the need for dental care in the mental hospitals by making better provision for their dental clinics. For example, in Alberta dental equipment is being provided under the federal grant for the provincial training school for mental defectives.

(h) Federal Aid For New Hospitals

An important part of the National Health Program is the provision being made to increase Canada's hospital accommodation. The grant for Hospital Construction, by making $13,000,000 a year available to the provinces, is providing a great incentive for hospital construction. New hospitals or additions to hospitals containing some 6,400 beds have already qualified for federal assistance and an even greater number will be considered during the next few weeks. The construction of new hospitals and nursing stations should serve to attract physicians, dentists and other health personnel to areas formerly ill-provided with hospital, medical and dental care, and thus do much to correct the maldistribution in Canada both of health services and health personnel.

(i) Federal Encouragement of Education in Dental Care

Besides the important developments that I have noted—which are, after all, only in the first stages of an expanding program for preventive dental health care—the $30,000,000 federal health plan is encouraging health education, especially in schools. This should lead to increased understanding of good dental hygiene. With more energy being put into dental health research and education and with far more attention now being given to preventive dentistry — particularly for young children — we can reasonably expect that tooth decay will become a gradually less harrassing health problem for the rising generation.

PROGRESS IN PREVENTIVE DENTISTRY

The profession of dentistry is little more than a century old. Of necessity, the emphasis in the first periods of its development was on the restoration or replacement of teeth damaged by disease. But in recent years, as scientific knowledge has improved, dentistry has increased its efforts not only to control dental disease but also to teach us how to prevent it. In planning its program for this Children's Dental Health Day, the Ottawa Dental Society is discharging two important responsibilities: first, it is giving leadership to the members of its profession; and second, it is informing the public of the basic facts of dental health.

The need for focussing attention on dental problems of Ottawa children is amply seen in a survey made in Ottawa last year of the dental health of some 7,000 children, from four to ten years of age. Of these 86% had defective teeth, and each child had, on the average, nearly five cavities. Even more startling is the fact that 43% of these children reported that they had had no previous dental treatment.

The dentists of this community are today studying the most recent scientific findings and techniques of preventive dentistry, especially as they apply to children. Throughout the day, public meetings and demonstrations are being held to promote public understanding of the importance of dental hygiene to the child's general health and of the vital necessity for every child to receive adequate dental health care before it is too late.

As Minister of the federal department which is particularly concerned with all efforts to conserve and to promote the health and well-being of the Canadian people, I am convinced that a healthy community must first of all be a well-informed community. Health education is vitally necessary in all efforts to improve health. The Dental Health Division of my Department assists in health education through pamphlets, posters and ex-

hibits. Every effort is made to tell the people about the prevention of dental disease. The Division has also prepared the first all-Canadian dental films and film-strips. To encourage an even greater interest on the part of the dental profession in children's dentistry, the Division sponsors short refresher courses under the direction of an eminent specialist in dentistry for children. So successful have been his efforts that from all parts of Canada requests flow in for his services.

Until a few short years ago, practical preventive measures that could be widely applied against dental disease did not exist. Today, after long, arduous and often disappointing years of careful effort, dental research seems finally to be nearing its goal. Dentistry is entering the era of prevention at a time when there is increasing evidence that control of tooth decay is at last a practical possibility.

Today has been set aside as Children's Dental Health Day. This action is proof of the enlightened outlook of the Ottawa Dental Society and the Ottawa Dental Public Health Committee. It is, I am sure, a symbol of the progressive viewpoint of dentistry in Canada. Now that through the National Health Program more help is being given to support your endeavours, now that research is unlocking the secrets of dental disease, now that the practice of preventive dentistry can save so many young Canadians from dental disease, your achievement or your failure will be judged by the generation whose dental health is in your hands.

ANNOUNCEMENT

Annual Seminar in California

The Sixth Annual Seminar for the Study and Practice of Dental Medicine at Palm Springs, California, will follow the American Dental Association Convention set for San Francisco October 17-21. The dates set for the Seminar, October 23-28, are conveniently arranged to enable those persons interested to attend both important gatherings.

Early arrangements should be made by contacting Miss Marion G. Lewis, Executive Secretary, 1618 Ninth Avenue, San Francisco 22, California.

Seven outstanding speakers will discuss and compare the most recent discoveries in dentistry and the related fields of medicine and biology. They include: Arthur C. Curtis, M.D., Professor and Director of the Department of Dermatology and Syphilology at the University of Michigan; Wilton Marion Krogman, Ph.B., M.A., Ph.D., Professor of Physical Anthropology, University of Pennsylvania; Seymour M. Farber, M.D., Assistant Clinical Professor of Medicine, University of California Medical School; Balint Orban, M.D., D.D.S., Professor at the University of Illinois; D. Harold Copp, M.D., who is collaborating with the Division of Dental Medicine at the University of California; Francis A. Arnold, Jr., B.S., D.D.S., Sr. Dental Surgeon, U.S.P.H.S.; and Paul Popenoe, Sc.D., Director of the American Institute of Family Relations in Los Angeles.

It may be possible, indeed I think it should be possible, for an enlightened government to devise a plan of compulsory national health insurance which will not endanger the soul of medicine; but this has not yet been done in any country.—Wm. Magner, M.D., in Can. Med. Assoc. Jour.

GOLD FOIL—THE CLASS FIVE RESTORATION*

by H. M. CLINE, D.D.S., Vancouver, B.C.

IN this age of scientific achievement dentistry has grown up to take its place as one of the great healing arts, is an independent profession and has become an indispensable part of our way of life. With this stature comes added responsibility so it is well to reflect on the last hundred years in dentistry, learn from its lessons and build soundly for the future.

In our retrospect let us realize that with the advances in dentistry have come improvements in the understanding and control of dental caries and advances in the operative technique of caring for the destructive processes in teeth.

Naturally in the lush enthusiasm of new materials or methods many are carried away with the promise of an "easy out" to the problem. This is true of the patient-demanded "porcelain filling", the silicate cement; to a certain degree acrylic restorations; even the cast gold inlay depends on the weakness of a cement to, in many cases, not just seal but rather fill in the margins. As the pendulum swings backward then gradually settles, these take their proper place in the dental scheme of things.

This is true too of the uncertain results obtained in applying the teachings of "dental medicine" with the inference of fast and easy control of dental caries. We must be warned of the "Fast and Easy" methods.

Despite all that has been done by the research men on the control of caries there is not much promise of an early and easy solution to the problem. For example, as I interpret the latest information from the American Dental Association in respect of sodium fluoride it tells us that with proper and adequate treatment we may expect to control at most about 40% of caries in the age group up to 14 and this only under a certain strict and definite series of treatments. This being the case it is up to you and me as dentists to deal with the problem in a realistic manner, that is by applying all preventive methods possible, by detecting destructive processes at a very early stage of development and operating on them with the utmost skill for which it is possible to be trained.

In considering the weapons at our command to combat the problem of dental caries, erosion and abrasion, I chose the filling of class 5 cavities, on the gingival of the tooth, with gold foil as being the ultimate in treatment of these teeth. It is in this location that no other filling material so nearly satisfies the requirements of the perfect and it is here, fortunately, the technique of insertion of gold foil is more easily mastered.

At this point I wish to pay tribute to Dr. W. I. Ferrier of Seattle who by the refinement of instruments and technique, by his inspiration to and leadership in the study club movement has done so much to bring back, in at least a part of the continent, gold foil to its proper place in dentistry. With him are associated the fine men of the Seattle Study Club, for many years under his instruction and now several of them carrying on his teachings to other clubs operating on the same principle as the parent club. In the case of our Vancouver Ferrier Study Club, Dr. Ellsperman, a member of the Seattle Study Club, has acted as instructor and has given unselfishly of his time and talents to instruct this group over a period of twelve years. These men and the earlier pioneers in

*Presented before the National Convention of Canadian Dentists at Murray Bay, Province of Quebec, June 20-24, 1948.

dentistry have not only served the cause of gold foil but by the very nature of the technique demanded for its manipulation, have trained men to be more skilful in handling the other methods and materials used in restoring lost tooth structure, that is the gold inlay, porcelain inlay, acrylics, amalgams, yes and even silicates.

In order to avoid argument due to misunderstanding let us consider the Indications for Gold Foil, (Ferrier).

INDICATIONS

1. Incipient caries.
   "The less the amount of decay, the greater the indications for foil."
2. Accessibility.
3. Adults in normal health.

CONTRA-INDICATIONS

1. Prolonged operations in youthful patient.
2. Patients with paradontosis.
3. Highly nervous patients.

Add to this, erosion and abrasion in the case of the Class Five Restoration which is most important in this age of faulty tooth brush technique, citrous fruits etc., then keep in mind the observation of Dr. Ferrier, namely, "The less the amount of decay, the greater the indications for gold foil."

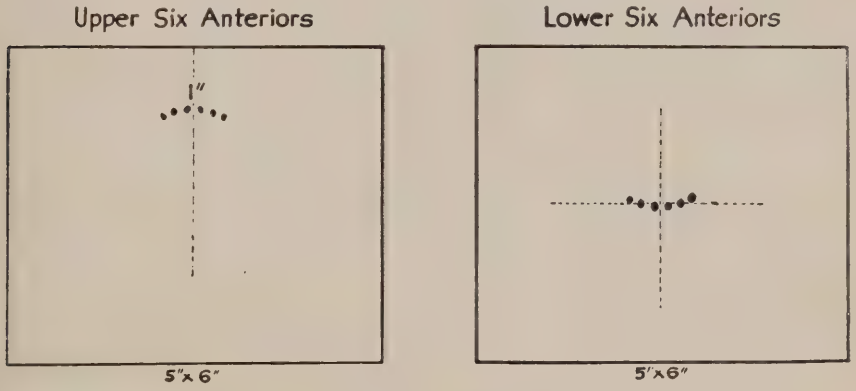

ILLUSTRATION 1

Showing a standardized method for punching the rubber dam for the upper and lower anteriors.

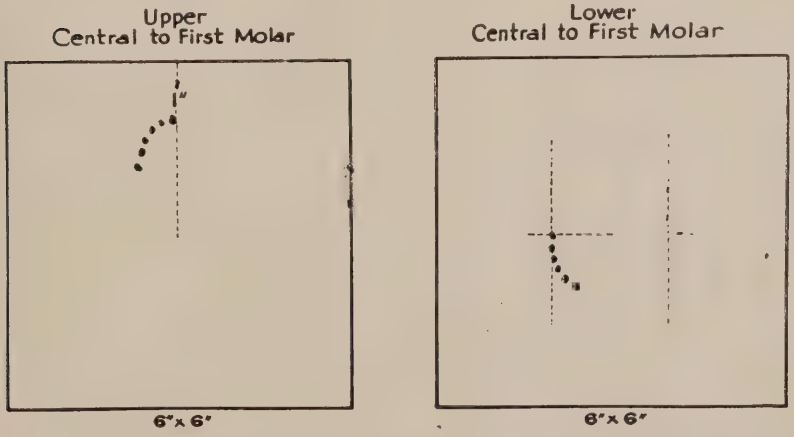

ILLUSTRATION 2

Punching the rubber dam for upper and lower central to first molar. The dotted lines for illustration purposes divide the dam to properly place the punch pattern.

Operating a Class Five back to and including the second bicuspid is well within the ability of the average dentist.

Rubber Dam

The use of the rubber dam, first conceived in 1864, is a prerequisite to the successful use of gold foil, in fact should walk hand in hand with other operative procedures such as cavity preparation for inlays, gold, porcelain and acrylic;*jacket crowns;* amalgam fillings; cementation of inlays etc. I will not take from our available time to deal in detail with a technique for the application of the rubber dam as excellent reprints have been written showing this procedure. I might however call your attention to certain points of interest.

1. Punch Patterns for Rubber Dam: A standardized method should be adopted. Illustrations 1 and 2.
2. Rubber Dam Pads: A well designed rubber dam pad should be used to add to the comfort of the patient.
3. Bicuspid and Molar Clamps: A few well selected clamps should be available.

The following will be found to meet most requirements:

Bicuspid:

Ivory 00-1-2

Molar:

Ivory 5-56-10A-11A

S.S. White 18-26-201

Any of these clamps that have dam-engaging projections should have same removed, finishing similar to the S.S. White No. 18 and 26.

4. Gingival Clamps: The Ferrier No. 212 Clamp is to be particularly noted. This clamp will satisfy most requirements. Only occasionally need one resort to a clamp such as the Hatch. The wide anterior aspect of the Ferrier Clamp makes for ease of access in cavity preparation, filling and finishing. The jaws of this clamp may be changed to suit different teeth and will be adaptable to almost all occasions. This clamp should be blocked with compound after its position has been established. The free gum margin varies in different patients, locations, and conditions, so it is a good precaution to test this with a blunt explorer or probe and if necessary mark the margin on the tooth with a 33½ bur before the clamp is positioned. This will be a guide in placing the clamp properly.

Instruments

To relate instruments of different makes and kinds note Dr. G. V. Black's formula sequence:

1. Width of the blade in tenths of millimeters.
2. Length of the blade in millimeters.
3. Angle of the blade with the shaft (or handle) in centigrade degrees.
4. Angle of the edge of blade with the long axis of the shaft in centigrade degrees.

Dr. Ferrier in his modernization and refinement of gold foil has made a selection of instruments based primarily on the work of his predecessor leaders, has insisted on them being made to a greater degree of precision and made improvements, as for example in the hoes. These are sharpened on both sides as well as the edge so that three cutting edges are available for use. It is necessary that these be kept sharp and to this end a good sharpener should always be handy. To operate a class five cavity for gold foil certain hand instruments in addition to 33½, 34 or 35 burs have been chosen for purposes of this paper as a minimum requirement for most cases. These are:

Hoe No. 21 Formula 10 4 8

Hoe No. 23 Formula 6½ 2½ 9

Waedelstaedt chisel small No. 3

Waedelstaedt chisel small contra-bevel No. 4

Angle former No. 34 (Right) 7 80 2½ 9

Angle former No. 35 (Left)

Cavity Preparation

The following are the steps in cavity preparation as laid down by Dr. G. V. Black and accepted to this day as standard.

1. Establish the Outline Form.
2. Obtain the Resistance Form.
3. Obtain the Retention Form.
4. Obtain the Convenience Form.
5. Remove the Remaining Carious Dentine.
6. Finish the Enamel Margin.
7. Perform the Toilet of the Cavity.

Outline Form

Certain points of difference are to be noted in the outline as advocated by Dr. Ferrier and the older outline form. (Illustration 3) You will note that the old, somewhat kidney-shaped outline is superimposed on the completed cavity of the new type by way of comparison.

NOTE: The typical preparation of Dr. Ferrier (Illustration 4) shows:

1. Straight lines in outline for aesthetics, resistance form and extension to areas of immunity.

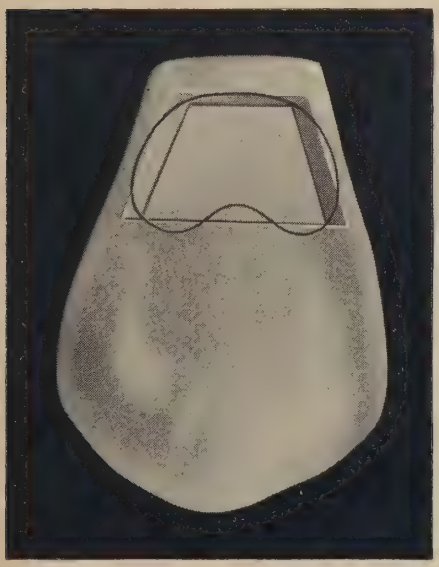

ILLUSTRATION 3

A comparison of the old and new outlines. The old outline is superimposed on a new type cavity.

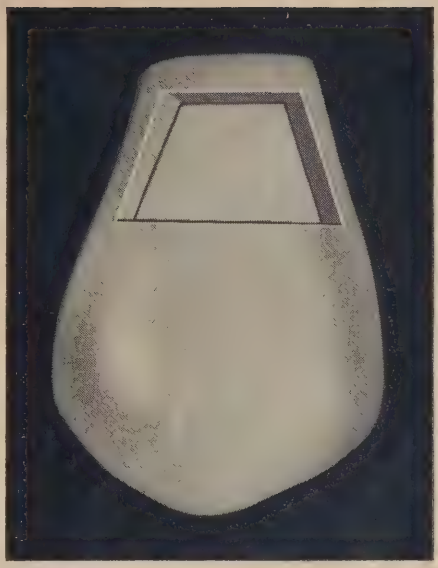

ILLUSTRATION 4

The typical preparation looking into the gingival retention.

2. Mesial and distal walls flaring to avoid weakening.
3. Retention between gingival and incisal or occlusal.
4. Axial wall as flat as possible.
5. All line angles and points angles very definite.

Preparation Of Cavity

A 33½ bur or larger cuts with its end the gingival, mesial and distal walls. With the side of the bur cut the incisal outline.

23 hoe (6½ 2½ 9) or 21 (10 4 8) depending on the size of the cavity is used to form the interior, to square up the cavity and smooth the axial wall. Cutting is done with both the edge and side of these instruments.

Waedelstaedt chisels are used to supplement the hoes in forming the axial wall and establishing fine cavo surface angles.

A variation from typical is treated as in Illustration 5. This follows the fine line of etching or caries that so often causes failure in a short time, and is cut with a minimum of tooth destruction. This principle may be

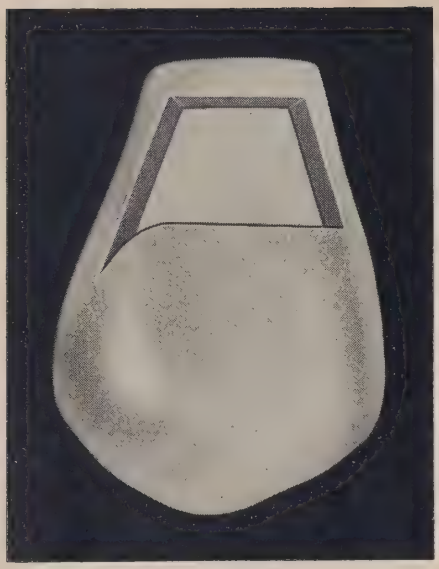

ILLUSTRATION 5
Variation from typical to follow a fine line of etching or caries.

applied according to the need of the case. Similar instrumentation is used as for the typical.

INSERTION OF GOLD

A Pneumatic Condenser is the modern answer to the automatic plugger that has served dentistry so long and faithfully. The malleting of choice however is the long handle plugger in the hands of the dentist, the leather faced mallet in the hand of a well trained assistant. This requires the ultimate in team work but the result justifies the effort. It gives a combination of hand and mallet pressure, is more expeditious, and according to an article in the Journal of Dental Research, Vol. 24 No. 2, April, 1945, does produce slightly denser foils than any other method except heavy blows on the pneumatic mallet.

A selection of hand mallet pluggers would be:

No. 13—Formula	6	12	6	12	
No. 14—Forumla	12	6	6	12	
No. 10 (For Holding)			.5	8	10
No. 1			.5		
No. 4			.5	4	6
Parallelogram (Hatchet)			.4	8	6

ILLUSTRATION 6
Protecting the margins of the cavity with non-cohesive (soft) foil.

Non Cohesive cylinders or pellets, depending on size of cavity are placed against gingival, mesial, distal and

ILLUSTRATION 7
Showing ideal location of gum margin when the gold filling is finished and the rubber dam removed.

incisal or occlusal walls, overlapping cavo surface line and point angles to protect these from harm during malleting (Illustration 6). The soft foil is placed in position with pluggers Nos. 13 and 14. Cohesive foil is started in the middle of the cavity and built to the walls first with hand pressure then the mallet, forming as it is being built up in a saucer shape. The line of force is as nearly as possible directed to the axial wall. In condensing the gold, step from the centre of the cavity to the margins; and build to contour avoiding undue excess thus expediting finishing, using pluggers Nos. 1 or 2 and sometimes the parallellogram or Ferrier No. 7.

Finishing

A selection of instruments useful for this purpose is as follows:

Shooshan files 2S 3S pull cut and push cut
Ferrier knives 29, 30
Cleoid
Whiteside scaler No. 2

This choice may vary with the individual operator. Use these as indicated and follow with ⅜" paper discs, fine garnet, coarse and fine cuttle on small mandrel, sometimes a sulci disc then fine pumice and swansdown or carmi lustre. A high polish is desirable on the Class Five gold foil but in achieving this be very careful not to ditch the gingival as most of these have this margin in cementum. The Class Five foil is the hardest to finish—so please take this warning to heart. When finished the gum margin should come over an ideal foil filling as in Illustrations 7.

This then is a technique for the most respected restorations in dentistry, standardizing procedure to simplify its use and at the same time satisfying the requirements of aesthetics.

1428-9 Medical-Dental Building

The prevention of coronary disease should begin at birth, and methods for this may someday be devised if we can discover the essential variables in susceptible individuals. I have never been convinced that worry and nervous strain were more than precipitating factors for "coronary attacks". What are called the stresses and strains of modern life are perhaps no more disturbing than the tensions of previous millennia, such as the caveman's struggle with sabre-toothed tigers, or the medieval terrors of famine and the Black Death. What really causes the apparent increase in coronary disease is that men didn't live long enough in former ages to acquire it in impressive numbers.

As a practical procedure we are now advising low cholesterol diets in families with a high coronary disease inheritance and giving small doses of thyroid extract, starting with ¼ grain a day, to individuals when the metabolism is in the minus range and the blood cholesterol high. At the moment the most encouraging lead in the coronary problem seems to be the attempt to explain the aberrations of cholesterol metabolism and deposition.—Howard B. Sprague, M.D., of Boston, in Transaction of the College of Phy. of Phila.

Comment

By the surgical resection of periodontal pockets, many teeth that in the past would have been condemned to extraction can be preserved in health. Surgical resection has the added advantage of requiring less skill than subgingival curettage, consuming less time and being attended by more certain results.—Arthur H. Merritt, D.D.S., M.S., Sc.D., New York, in Jour. of A.D.A., Nov. 1948.

To be seventy years young is sometimes far more cheerful and hopeful than to be forty years old.—Oliver Wendell Holmes.

FULL DENTURE CONSTRUCTION AND DUPLICATE DENTURES

by DR. M. L. SIMON, Montreal, Quebec

THIS method of Full Denture Construction is one in which the final impressions are both taken at the same time by the Closed Mouth Technique. These impressions are taken after the teeth have been properly ground and articulated, whereby the waxed setups and impressions are taken directly from the mouth to the flask, and processed.

In presenting this method, I would like to proceed through all the necessary steps that will lead to the completion of a practical case. First of all, let us ascertain what are the essential and the favourable features in the retention of Full Dentures.

1. Form of maxilla and mandible.
2. Adhesion to mucosa.
3. Athmospheric pressure.
4. Amount and viscosity of saliva.
5. Pressure from above and below.

1. Size, shape and form of vault, tuberosities, muscular attachments, mucosa and ridges.
2. Adhesion to mucosa is obtained by proper impression taking whereby dentures possess good overall contact with tissues.
3. Athmospheric pressure is obtained by good peripheral seal and proper post-damming.
4. Thick viscous saliva is what gives good peripheral seal, if accommodated with a proper impression.
5. Pressure. Proper setting up of the ridges so as to keep the dentures in proper functioning balance and not cause tilting under masticatory forces.

There are also the lateral forces of mastication to be overcome. If these forces are stronger than the aforementioned forces, there will be lack of stability and movement of dentures. If these forces are powerful enough to overcome the lateral forces of mastication, then the dentures will have functional stability. We still must not overlook the natural comon sense that the patient displays in some of our own shortcomings in denture construction. They develop eating habits that help them to get along through their own initiative. I always inform the patient at the time of insertion of the dentures that I have applied the art of making dentures and that they will have to develop the skill in wearing them.

Description of Impression Material Zinc Oxide and Eugenol Paste

Difficulties are often encountered in using modelling compound and waxes that are heated before use, and plasters that generate excessive heat while setting, because any material that reaches a temperature of 10 to 15 degrees above that of the body, produces a marked dilation of the peripheral blood vessels of the soft tissues and thereby causes distortion of the impression. Therefore Zinc Oxide and Eugenol paste has found increased use in recent years. It consists of a metallic zinc oxide powder, a resin and a combination of fixed and volatile oils. The mixture has the properties of a paint and a cement. It is easy to handle, but by no means fool-proof. The paste is sticky, and precautions should be taken accordingly to protect the face and lips. It should be allowed to harden properly before removal, and if it sticks, plenty of cold water and not force should be used to remove it. The tubes should be sealed and kept in a cool, dry place.

The most successful dentures are those for which impressions were made from waxed set-ups, taking the case from the mouth to the flask. Since the paste does not dissolve when it comes in contact with the saliva, it is

particularly useful in making full lower impressions.

The paste has a relatively long setting time, is sufficiently resistant to allow building up of the borders, adheres well to dry surfaces of compound, vulcanite and shellac bases, and allows accurate recording of tissue surface conditions. The impression is of a cement-like hardness, does not shrink much in setting and does not require a separating medium. Corrections can be made where there are deficiencies, as it is carried back to the mouth if it is necessary. Recent tests have shown that cement impressions provide excellent stability and comfort when completed. As for the material or any other material used in taking impressions, it is still mostly a matter of the operator and not the material, as it is the dentist who obtains the correct impression and not the material that he uses.

In this procedure I do not use any face-bow or any special articulator, nor do I take any condylar patch tracings. I treat every case as an individual case. I make the necessary changes required in vertical dimension, size and mould of teeth, and the necessary changes in the appearance of the teeth in the patient's mouth. The changes are made immediately at the chair, and must receive their approval before proceeding to the next step, as that is exactly what the dentures will look like when completed and inserted. I find that by this method I am able to obtain and maintain complete control of my set-ups and vertical dimensions, as it is impossible for the technician to alter the conditions after I have taken my final impressions. In any other procedure the technician may alter the set-up to convenience himself, and I venture to say that in many cases where the dentist is amazingly surprised to find that the bite in the completed case is incorrect, the fault often lies in the changes made after the try-in has been verified in the mouth, by the technician in the laboratory, when making minor alterations in order to simplify his work.

On the question of bite-opening, it is harmful to increase or decrease the vertical dimension of the denture space beyond that which is normal and natural to that individual. The warning "In every individual the muscles of mastication bear a relation to other parts of the head that are not duplicated in any other person," should be heeded not only by those who presume to change the denture space, but by each dentist who makes any restoration, however small, for the oral cavity. One of the most serious errors in judgment is that of trying to adapt the patient to the restoration rather than adapting the restoration to the patient. It appears advisable whenever possible to re-establish the normal vertical dimension of the denture space, which through abrasion or loss of teeth may have become shortened. The loss of vertical dimension results in a closed or infra denture space which may disturb the patient's comfort and lead to serious results, unless the vertical dimension is restored. It may be advisable to resort to bite-opening in some restorations, particularly in complete and immediate dentures, where absorption is likely to occur, otherwise the vertical dimensions of the denture space may be too small after the dentures are worn for a few weeks or months.

Although many dentists are adverse to increasing the denture space even to its normal vertical dimension, there is little evidence to prove that the results are more detrimental than those caused by overclosure of the vertical dimension, which is a common error in most dental restorations.

In my search for short-cuts in denture construction and my utter dislike for remaking dentures due to faulty bites, I have found this a method in denture construction whereby I have not had to remake a set of dentures in many years, due to faulty bite. I have used it for many years and I have obtained a great amount of satisfaction in the service that I have rendered to

my patients in the field of Full Denture Construction.

Step by Step Procedure

1. Take snap impressions of the upper and lower areas in compound, getting over-extension and maximum tissue coverage.

2. Pour casts in model plaster and separate.

3. Draw denture outlines on casts to where you estimate your finished dentures will extend. Fig. 1.

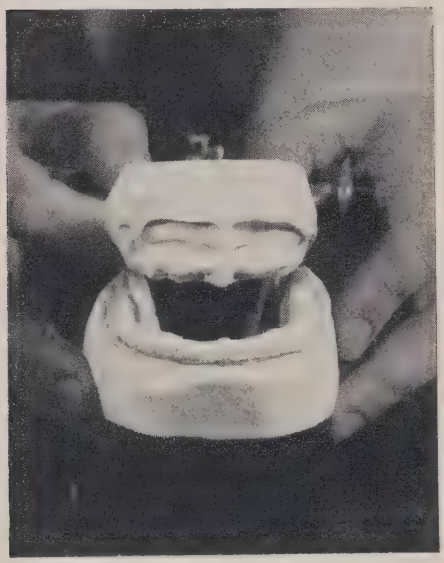

FIG. 1

4. Mark off posterior extent of the upper denture at the palatal area.

5. Groove out that area to a depth of 1 mm. with the point of a sharp penknife, and gradually bring it flush with the palate anteriorly. This will act as the post dam area in the finished denture.

6. Construct shellac base plates to the lines drawn on the casts. Verify if base plate fits snugly into the grooved area. In hot weather it is advisable to adapt a piece of stiff wire of about 15 or 16 gauge and wax it to the posterior border of the upper base plate. This will prevent distortion on the upper shellac base plate due to increased body temperature. The same procedure may be adopted if necessary, by wiring up the lingual aspect of the lower base plate.

7. Build up bite rims in a semi-hard wax. Do not carry bite rims back too far in the retro-molar area, as this only necessitates cutting it away subsequently. The wax should not extend any further back than where the distal of the second molars will terminate.

8. Carry base plates with bite rims to the mouth and adjust at the periphery to be free from muscle impingement internally and externally. Listen for the break of the seal when pulling on the lips and the cheeks in both the upper and the lower, while supporting the base plates in position with the fingers of the other hand. Grind away at the periphery if necessary, even to excess, as the impression paste will restore it to accuracy in the final impression taken by the closed mouth technique.

9. Cut down bite rims to get the occlusal plane. The wax of the upper should extend 1 mm. below the lip line at rest. The occlusal plane should be in a line parallel to a line drawn on the face from the external auditory meatus to the ali of the nose.

10. Upper. Mark off:
   a) Vertical median line.
   b) Lines at the distal of the canines, corresponding to the corners of the mouth at rest.
   c) Upper lip line, following the area showing when the patient smiles broadly.

11. Lower. Cut down the wax of the lower to contact the upper and adjust to the proper vertical dimension, being certain that the profile appearance is correct. Mark off the lower lip line.

12. Continue the three vertical lines from the upper to the lower and check for the centric.

Definition of Centric

"That positional relation of the mandible to the maxilla when the condyles are in the most retruded position in the

glenoid fossa, from which all lateral movement starts."

Helpful Tip for Obtaining Correct Centric

In attempting to obtain the true centric, with the mandible in the most retruded position, the patient often encounters very much difficulty due to the many various positions the mandible may assume. By asking the patient to draw the lower jaw inwards, in their over-zealousness to do so, they become confused, and do the reverse. This factor may be easily overcome by asking them to do the impossible. They are asked to bring the jaws together and while doing so to PUSH THE UPPER JAW OUT. In attempting to do this, they immediately disassociate all their thoughts from the lower jaw, and concentrate on the upper jaw In this way, the proper centric relationship is obtained with very little difficulty.

13. Check with the point of a small pen-knife for contact of the base plates with the alveolus in the upper and the lower. Fig. 2. The purpose of seeing that the wax rims are in contact and that the base plates are in contact with the alveoli will be seen at a further stage in the procedure, when the final impressions are taken.

FIG. 2

14. Seal with a hot spatula at three or four points and take shade.

15. Mount on the articulator and check the vertical dimension by trying one base plate at a time. Remove the lower base plate from the articulator, while leaving the upper base plate in place. In this way we can determine whether the space is too small or too large, or is the proper distance for the lower teeth to be placed directly on the ridge. Similarly, by removing the upper base plate, while leaving the lower on the articulator, we can determine whether there is the proper space for the upper teeth to be properly placed in relationship to the upper ridge.

16. Choose the approximate teeth from the mould guide.

17. If the vertical dimension is too great, pare away the wax on the upper or the lower, but to a greater degree between the cuspid lines. Soften up the wax on the bite rims distal to the cuspid lines. In this way we can regulate the amount that the vertical dimension is decreased, as the closing of the bite will cease when the cut away anterior areas come in contact with each other. This simplifies getting the proper centric, since there is no contact at the anterior area, thus compelling posterior contact and preventing the jutting out of the mandible.

18. Check again in the mouth with the point of a pen-knife. Fig. 2. In obtaining the proper vertical dimension, allowance should be made for various factors. The space will be proportionally greater where the teeth were removed and not replaced a long while back, where the teeth were prematurely removed due to periodontoclasia, and in cases of elderly persons, where natural alveolar absorption has taken place.

19. Reset upper only on the articulator.

20. Set up six upper and six lower teeth from the mould guide and try in for size, mould and appearance.

21. Obtain the proper teeth, and try in the six upper and the six lower anteriors without grinding them. Obtain the patient's approval of the mould, shade and appearance of the teeth.

22. Set up and grind in all the teeth of the chosen mould and shade Set the teeth directly over the ridges in order to obtain functional balance. If necessary have the anterior teeth out of function. Avoid crowding of the teeth, thus interfering with the free action of the tongue while talking and eating.

23. Try in and check with point of knife for separation. Fig. 3.

FIG. 3

24. Check for position and appearance of the teeth in reference to the showing of the denture material when smiling, laughing and talking. Adjust where it is necessary.

25. Check with the point of a knife in the molar areas, and if the teeth can be separated to a slight extent, ignore it, as a small separation will be corrected in the final impression taking. Fig. 3.

26. If the separation is very marked, seal pieces of carding wax over the lower bicuspids and molars and get the proper centric bite. The proper bite will be more easily obtained when the teeth are properly articulated on the base plates, as the patient has proper guidance by the interlocking of the cusps of the teeth, rather than trying to get the centric with two smooth surfaces with no proper guide for the correct mandibular position. If the posterior teeth can be separated with an instrument, it reveals that the base plates are not in contact with the alveoli in the posterior areas. This means that when the final impressions are taken this space will be filled in with the resinous impression material, adding unnecessary weight, and causing the finished dentures to be thicker than is necessary.

27. Reset uppers only on the articulator, and bring the teeth into proper articulation.

28. Try in again and check for separation. Fig. 3. Test for phonetics by having the patient repeat several times the phrase "Empty Saddles". In repeating this phrase without difficulty and without any hissing or whistling, the articulation is correct. If there is any difficulty encountered, the articulation will have to be readjusted until it is overcome.

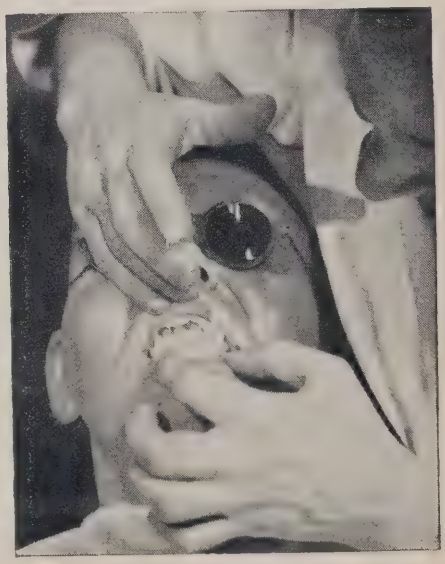

FIG. 4

29. Dry base plates with alcohol and compressed air.

30. Vaseline lips and area surrounding the mouth.

31. Take final impressions with impression paste of both cases at the same time, under biting stress, by the closed mouth technique. Fig. 4.

32. Carry some of the paste over the peripheral margins of the base plate, in order to obtain peripheral seal of the dentures.

33. Place lower base plate in the mouth first, and immediately insert the upper and have the patient bring the articulated teeth together.

34. Allow thirty seconds flowing time under slight pressure.

35. Have the patient close down a little harder and pull down the upper lip, then pull up the lower lip.

36. Press and massage cheeks in all directions and allow to set from 5 to 7 minutes. Fig. 5.

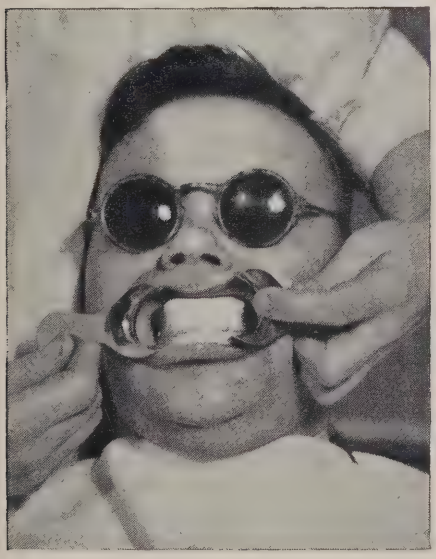

FIG. 5

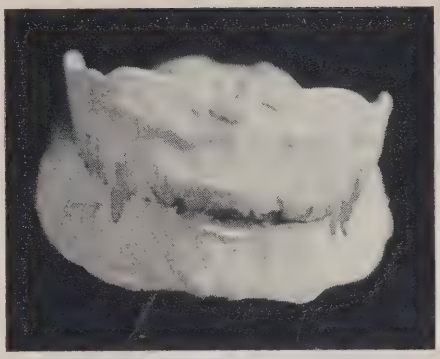

FIG. 6

FIG. 7

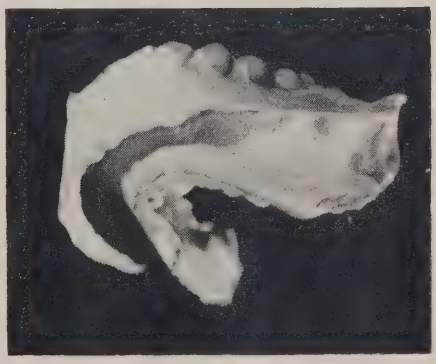

FIG. 8

37. Remove cases from the mouth by the use of cold water from the syringe, and drawing upwards and downwards on the lips. Examine the impressions closely, and if there is any deficiency in the impression, dry the area and apply a new mix where it is necessary, replacing both cases in the mouth. Fig. 6, 7, & 8.

38. Mark of relief for the hard spots, and for the anterior palatine nerve and artery.

39. Remove excess impression material from the face with chloroform. If there should be any minor discrepancy in the articulation at this time, it may now be corrected. It is done after pouring the impressions in stone, by removing the excess impression material from the teeth and re-setting the opposing teeth in their proper relationship.

40. Finish and insert dentures, and check for separation in the molar areas. Fig. 9.

FIG. 9

Mixing Hint

To simplify mixing of the base and the hardener in the impression taking, get a piece of 2 x 4 scantling wood about 12 inches long. Cut pieces of medium weight cardboard about six inches long and the width of the wider surface of the 2 x 4 block. Tack this down on the block with large size thumb tacks. This will give you a platform, slightly raised, upon which you make your mix. The block is held firmly with the other hand, and the spatula will not tear up the mixing surface, as generally happens when using paper mixing pads. When the mix is completed, the soiled piece of cardboard is discarded, eliminating cleaning up of mixing slabs or paper pads.

No Gum Front Cases

In such cases, use sticky wax to hold the teeth in place. Avoid bone surgery if possible, as patient has fear of surgery. The alveolus should not be removed, as nature has placed it there for a purpose. It is more advisable to construct a no gum front case and allow the alveolus to wear down over a period of 10 to 15 years rather than remove it all at once. If it does cause eventually a flabbiness of the gums, it is much more advisable to do a gum resection eventually, rather than a bone resection immediately.

Flabby Gums

Mark off flabby areas on the casts. Build up several layers of tin foil, according to the flabbiness of the gums. Then build up base plates over the tin foil, allowing the paste under the base plate to flow freely, and thus avoid compression of the tissues.

Duplicate Dentures

This method has one other great advantage that I would like to present and that is in the field of Duplicate Denture Sets. I have made duplicate sets where the upper of one set was used with the lower of the other set and vice versa. Many of you have had occasions where the patient, during the time that a denture was being repaired, and not wanting to go about dentureless, would wear a mixed set of dentures, and were able to use them. If that is possible, then with duplicate sets made on the same articulator, with the vertical dimension properly established, it can be done satisfactorily. Secondly, some patients would seriously consider having a second set of dentures for an emergency, but hesitate at the idea of going through the complete procedure for a second time.

In making duplicate dentures, the proper occlusal plane and vertical dimension is established and transfer-

red to the articulator. Two similar moulds of teeth are obtained at the same time. A second set of base plates with bite rims are made by waxing up the second lower base plate to the first upper bite rim. In this way, two identical sets of waxed up bite rims are obtained.

You now proceed to wax up, grind and articulate one complete set of uppers and lowers. These are checked in the mouth. When all the steps have been verified in the mouth, the case is then followed up in the laboratory.

The first articulated upper set is placed on the articulator and the second lower bite rim is set on the lower portion of the articulator. The second lower set of teeth is articulated to the first upper set. Then the second upper set of teeth is articulated to the first lower set of teeth. Then the second upper and lower sets of teeth are articulated to each other. In this way two similar sets of dentures are constructed on the same articulator, having the same moulds and shades of teeth, the same vertical dimension and the same occlusal plane.

You then proceed for the final impression taking, with both sets of dentures as two distinct and individual cases, as outlined previously. Upon completion of both cases you will find that the upper set of A will articulate with the lower set B and vise versa, besides sets A and B articulating properly with each other.

REFERENCES

*1 Sylvester W. Cotter, Chicago, Ill. Illinois Dental Journal Oct., 1938.
*2 Vincent R. Trapozzano, New York, N.Y. J.A.D.A. Sept., 1939.
*3 John V. Mershon, Philadelphia, Pa. J.A.D.A. Dec., 1939.
*4 Lester Furnas, LaJolla, Calif. J.A.D.A. & Dental Cosmos, May, 1938

1117 *St. Catherine St. West.*

ANNOUNCEMENTS

Ontario Dental Association Convention

The eighty-second Convention of this Association will be held at the Royal York Hotel, Toronto. The Convention commences May 15 with a Reception and Musicale. The Program for May 16, 17 and 18 includes Group Clinics, Table Clinics, Essays, Visual Education, and the Exhibitors' latest displays.

For further information contact the Secretary, 86 Bloor Street West, Toronto 5, Ontario.

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at The Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver anniversary of the inauguration of this annual event.

First Maritime Convention

The Convention will be held at the Algonquin Hotel, St. Andrews-By-The-Sea, New Brunswick, August 31 and September 1 and 2.

Alpha Omega Fraternity

The closing meeting of this Society will be a dinner meeting to be held on May 16 in the library of the Royal York Hotel Toronto.

S. SPIVAK, D.D.S.

Canadian Dietetic Association

This Association is holding its Annual Convention on June 15 to 17 at the Fort Garry Hotel, Winnipeg, Manitoba.

A Program has been planned which will include Group Conferences, pertaining to the many phases of food work, interesting exhibits of food and equipment, and papers by outstanding guest speakers and members of the Canadian Dietetic Association.

ANNUAL CONVENTION

THE CANADIAN DENTAL ASSOCIATION

IN CO-OPERATION WITH

THE WESTERN CANADA DENTAL SOCIETY

The Bessborough Hotel, Saskatoon
Convention Home of Canadian Dentists
June 5-6-7-8.

INVITATION

With the greatest of pleasure we invite you to this National Convention to be held in Saskatoon on the above dates.

To us it seems unnecessary to point out to you the importance of such meetings—for the knowledge to be gained—old friendships to be renewed and new friendships to be made.

The different committees in charge of arrangements are working hard to ensure your greatest profit and enjoyment.

Such outstanding essayists as

1. Dr. P. G. Anderson, Toronto, Operative Dentistry
2. Dr. W. J. Pryor, Cleveland, Prosthodontia
3. Dr. J. C. Brauer, Seattle, Pedodontia & Preventive Dentistry

will be presen

To those of you considering extending your holiday following the convention, may we suggest a visit to Prince Albert National Park in Saskatchewan, or to Alberta's pride, Jasper or Banff.

Be sure and read the complete program which appears in this issue of the Journal.

Address all communications to Dr. L. D. Haselton, 808 Canada Bldg., Saskatoon.

ANNOUNCEMENT

PROGRAM of the Convention of

The Canadian Dental Association in Co-Operation with Western Canada Dental Society in Bessborough Hotel, Saskatoon

SUNDAY, JUNE 5th

P.M.	2.00	Registration—Main Floor Lobby
	8.30	Reception and Registration—Banquet Room

MONDAY, JUNE 6th

A.M.	8.00- 9.00	Registration—Main Floor Lobby
	9.00-10.00	Opening Exercises—Ball Room
	10.00-11.15	Essayist—Ball Room—Dr. W. J. Pryor, Cleveland, Ohio. "Important Procedures in Denture Service".
	11.15-12.00	Exhibits—Pictures—Mezzanine Salons
	12.00- 1.45	Luncheon—Speaker—Banquet Room
P.M.	2.00- 3.15	Group Clinicians—Pictures—Mezzanine Salons
	3.00- 4.45	Group Clinicians—Pictures—Mezzanine Salons
	5.00- 6.00	Exhibits
	5.00- 6.00	House of Delegates
	6.15- 7.45	Dinner—Ball Room
	8.00- 9.00	Essayist—Ball Room—Dr. W. J. Pryor, Cleveland—"Important Procedures in Denture Service."—continued
	9.00-10.00	Group Clinicians—Pictures—Salons 1-6

TUESDAY, JUNE 7th

A.M.	9.00-10.15	Essayist—Ball Room—Dr. J. C. Brauer, Pedodontist—School of Dentistry, University of Washington—Seattle. "The Children in Your Practice."
	10.30-11.45	Essayist—Ball Room—Dr. P. G. Anderson, School of Dentistry, University of Toronto—"Operative Procedures."
	12.00- 1.45	Luncheon—Speaker—Banquet Room
P.M.	2.00- 3.15	Essayist—Ball Room—Dr. J. C. Brauer, Seattle—"Everyday Preventive Dentistry."
	3.30- 4.30	Group Clinicians—Mezzanine Salons
	4.30- 6.00	Exhibits—Pictures—Mezzanine Salons
	6.30-	President's Dinner—Banquet Room—Dance—Ball Room

WEDNESDAY, JUNE 8th

A.M.	9.00-10.15	Essayist—Ball Room—Dr. P. G. Anderson, Toronto—"Fixed Bridge Resorations."
	10.30-11.30	Group Clinicians—Salons 1-6
	12.00- 2.15	Luncheon—C.D.A. Annual Meeting—Banquet Room President's Address—Installation of Officers—Open Session—Presentation of Golf Awards
	2.30- 3.30	Dr. H. K. Brown—Chief of Dental Health
	3.30- 5.00	Table Clinics—Ball Room

GROUP CLINICIANS

1. Dr. W. A. Quigley— Faculty of Dentistry, University of Alberta, Edmonton. "Correction of Anterior Cross Bites in General Practice."
2. Dr. W. G. McIntosh—Faculty of Dentistry, University of Toronto, "Periodontal Infections."
3. Dr. H. R. MacLean— Faculty of Dentistry, University of Alberta, Edmonton. "Operative Dentistry."
4. Dr. J. Passalis— Oral Surgeon, Winnipeg, Manitoba. "Principles of X-Ray Technique and Diagnosis as related to the Oral Field."
5. Dr. H. K. Brown— Chief of Dental Health Division of the Department of National Health and Welfare. Exhibits and Lecture as sponsored by the Department.

GOLF:

There are numerous events and prizes, so come fully prepared. All competitions qualifying for prizes must be completed by 12 noon, Wednesday.

All arrangements are under the Chairmanship of Dr. F. Smith, 606 Canada Building, Saskatoon, Sask.

LADIES

Canadian Dental Association—June 1-5

GENERAL CONVENER.....Mrs. R. R. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
SOCIAL CONVENERS.....Mrs. R. V. Little & Mrs. F. G. Salisbury

THURSDAY—JUNE 2nd Afternoon at the home of Mrs. F. G. Salisbury—(Assemble in Ladies' Lounge, Main Floor).

FRIDAY—JUNE 3rd—2.00 P.M. MOTOR TOUR OF CITY—(Assemble in Ladies' Lounge, Main Floor). Buffet Supper at home of Mrs. L. D. Haselton.

SATURDAY—JUNE 4th—After 9.00 p.m.....Coffee Party

SUNDAY—JUNE 5th—Picnic at Forestry Farm.

GOLF BY REQUEST ANY DAY

LADIES

Western Canada Dental Society—June 5-8th

GENERAL CONVENER.....Mrs. R. L. Toren
GOLF CONVENER.....Mrs. C. L. Skinner
TRANSPORTATION CONVENER.....Mrs. Arthur Singer
REGISTRATION CONVENERS.....Mrs. L. D. Haselton & Mrs. N. F. Gropper

SUNDAY—JUNE 5th—Reception and Registration

MONDAY—JUNE 6th—Afternoon Tea at the home of Mrs. E. B. Nagle—(Assemble in Ladies' Lounge—Bessborough Hotel.)

TUESDAY—JUNE 7th—MOTOR TOUR BY REQUEST—Luncheon at 1.30 p.m. at Saskatoon Golf and Country Club (Assemble in Ladies' Lounge—Bessborough Hotel)
7.00 p.m.—Banquet and Dance

WEDNESDAY—JUNE 8th—11.15.....Lunch at Bessborough Hotel

GOLF BY REQUEST ANY DAY

Program of Canadian Dental Nurses' and Assistants' Association in Conjunction with the Western Canada Dental Nurses' and Assistants' Association

SUNDAY, JUNE 5th

P.M.	2.00	Registration
	8.30	Reception and Registration

MONDAY, JUNE 6th

A.M.	8.00- 9.00	Registration
	9.00- 9.30	Greetings from Saskatoon President—Mrs. Marion McCombe. Greetings from W.C.D.N. & A.A. Honorary President—Miss Mary McArthur—Winnipeg. Greetings from W.C.D.N. & A.A. President, Miss Eleanor Dix, Calgary. Greetings from C.D.N. & A.A. President—Mrs. Marion Edwards—Toronto.
	9.45-11.00	Western Canada Dental Nurses and Assistants Association business meeting—Salon 3.
P.M.	12.00- 1.30	Ash Temple Luncheon—Speaker
	2.00- 3.30	Mrs. Marion Edwards—"Friendship"—Adam Ball Room.
	3.30- 4.30	Table Clinics—Adam Ballroom
	5.00- 6.00	Exhibits
	9.00-	"After Nine Party"

TUESDAY, JUNE 7th

A.M.	9.00-10.15	Dr. H. R. MacLean—"The Dental Nurse in relation to Conservative Dentistry"—Salon 3
	10.30-11.45	Canadian Dental Nurses and Assistants business meeting Salon
P.M.	12.00- 1.45	Denco Luncheon—Speaker—Salon 3
	2.00- 3.15	Dr. W. G. McIntosh, "Periodontal Diseases and their Treatment"—Salon 3
	3.30- 4.00	Miss Mary A. Brett—"The Dental Hygiene Course at the University of Minnesota"—Adam Ball Room
	4.15- 5.00	Table Clinics—Adam Ball Room
	6.30	President's Dinner and Dance

WEDNESDAY, JUNE 8th

A.M.	9.30	"Breakfast Party"—Dining Room
	10.30	Mr. Tobey—L.D. Caulk representative—Adam Ball Room
P.M.	2.00	Installation of Officers—Western and Canadian Dental Nurses and Assistants Association—Salon 5

ANNOUNCEMENT

Meeting of Board of Governors of C.D.A.

The C.D.A. Governors will meet at the Bessborough Hotel in Saskatoon commencing Thursday, June 2, at 1:30 p.m.

Reduced Fares for Rail Travel to the Annual Meeting

The Canadian Passenger Association has authorized special convention rates for members of the Canadian Dental Association and their families travelling by rail to the Annual Meeting at Saskatoon.

Identification certificates permitting members to purchase tickets at a considerable saving may be obtained on application to the Secretary, Canadian Dental Association, 211 Huron St., Toronto, Ontario. IN ORDER TO PURCHASE TRANSPORTATION AT REDUCED RATE PURCHASER MUST POSSESS IDENTIFICATION CERTIFICATE.

FARE BASIS—Going and returning same route—one and one-half the adult normal one way first, intermediate or coach class fare applying via route used as shown in tariffs, plus twenty-five cents.

RETURN LIMIT—Thirty days in addition to date of sale.

The People's Health

The Canadian Institute of International Affairs will publish shortly a *Behind the Headlines* pamphlet entitled "The People's Health—Canada and WHO."

"The People's Health" divided into two sections will discuss firstly Canada's new health program and secondly the origin, aims and achievements of WHO. The authors are C. Fred Bodsworth, well-known Canadian journalist and Dr. Brock Chisholm, Director of WHO.

The Canadian Institute of International Affairs is a non-political, non-profit organization devoted to increasing knowledge of, and interest in international affairs in Canada.

Parents are becoming more educated to the dental needs of their children, and if we don't aid directly, or indirectly, in this cause, we are hurting ourselves as individuals. When we say directly or indirectly we mean either that we take care of the child in our own office or refer the patient to a dentist who will work for children. The parents will appreciate our honesty and sincerity in wanting the needs of their child taken care of in the best possible way. Let us not neglect children. Render them a direct or indirect service and we add security to our practice.

When we fail to see that children are cared for dentally we are also hurting ourselves collectively. The health of our children is one of the pillars holding Socialized Medicine before the public. If we don't take care of our children then we can expect the government to move in and do it for us.—Dean Robertson, D.D.S., in Bul. Oklahoma State D. Soc.

What an argument in favour of social connection is the observation, that by communicating our grief we have less, and by communicating our pleasure we have more.—R. K. Grenville.

The Forum

THE FULL CROWN

by HARRY A. TINKER, D.D.S., Minneapolis, Minn.

Condensed from North-West Dentistry, Jan., 1949

In presenting a discussion of the preparation of the full crown, it is well to emphasize two salient features. Primarily, this restoration is the strongest we have for abutments, and, secondly, it serves as the best method of restoring a badly broken-down tooth to normal function. When we are presented with the problem of securing the maximum amount of retention and resistance form from a tooth, the full crown has proven to be superior. In badly broken-down teeth, the preparation is more simple than on a relatively sound tooth; so, for the purpose of my paper, the latter will be described.

In the finished result, the walls should be tapered as little as possible, yet enough enamel must be removed to eliminate contours and undercuts. The finished crown should draw freely from its seat against the finishing line under the free gum margin. Insufficient cutting of the buccal and lingual enamel will cause distortion of the impression at the gingival and the inevitable result is an open margin in that area. Incidentally, there is less danger of pulp exposure in a properly cut full crown preparation than in any other type.

The steps in the preparation of the full crown are as follows:

1. A straight disc of as large a size as access permits is used on the mesial to cut through the marginal ridge and below the free gum margin. Usually, all of the enamel is removed in order to establish the proper taper. With the same disc, reduce as much of the mesio-lingual angles as possible. On the distal edge, the same procedure is followed except a cup-shaped disc is employed, especially in second bicuspid and molar areas. The position of the tooth varies the technique somewhat in that straight or cup-shaped discs are varied according to access.

2. Remove fillings and decay in all areas. Insert treatments and cement bases as indicated. Exceptions are shallow alloys and decay which can be removed later.

3. With a cross-cut fissure bur, or stone if desired, the fissures are cut out completely through the dento-enamel junction. In lower bicuspids, extreme care should be taken to avoid the pulp of the buccal cusp. This fissure cutting serves as a guide in the reduction of the cusps and gives added resistance form. It also gives added bulk for strength and allows for carving proper anatomy without danger of perforating the crown. Following the occlusal outline, enough tooth structure should be removed with a carborundum wheel to free the occlusion and give sufficient thickness of gold for strength and proper anatomy. This generally means through the enamel which is about 1.5 millimeters.

4. The buccal and lingual surfaces are reduced with heatless stones, generally 5/8 inch. This stone is preferred because it is not as harsh as a diamond and is about as fast.

At this point, it is well to emphasize the importance of this stone. We are all too prone to lay it aside before sufficient cutting has been done, especially on the buccal contours. In the final result, practically all of the buccal and lingual enamel has been re-

moved in order to have a preparation without undercuts. Usually the buccal is cut first along with the mesio-buccal and disto-buccal contours, as far as possible. Next, the lingual surface is cut down with the same type of stone and there, too, usually all of the enamel must be removed. This surface is easier, as the contours are usually not so great.

5. The access determines what instruments are used on the mesio-buccal and lingual surfaces. Cup-shaped discs are useful, as is the inverted cone-face cutting diamond stone used in the contra-angle, as there it is more flexible. Here again, care should be taken that sufficient contour is removed down to and under the free gum margin.

6. Too much importance cannot be given to the establishment of the finishing line. It is not a shoulder, but a definite line of demarcation below the free margin of the gum. Incidentally, it is much easier to establish an accurate margin in those cases where gingival fillings have been present, because they act as a guide in removing the buccal contours. A pointed stone is never used for the finishing line, as it grooves and does not cut a smooth definite bevel. A tapered blunt-ended carborundum or diamond stone is preferred. The importance of this step cannot be overemphasized and as much care should be used in forming the finishing line as in establishing the shoulder for a jacket crown. If it is not properly executed, an improper marginal fit will result followed by gum recession, sensitive areas and, frequently, gingival decay.

All of this cutting is done under a stream of warm water regardless of the use of novocaine or analgesia. It aids in cleaning the stones and burs, thus enhancing their cutting value, and does not subject the tooth to extreme thermal changes which endanger the life of the pulp. Boedecker, in his research, has cautioned us on this important factor.

Constant vigilance for details is essential. There are no short cuts for finished serviceable work.

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CLINICALLY NECESSARY

Editorial in Dental Record, Feb., 1949.

In a service where fees are paid from public or organizational funds those who administer the funds naturally demand some measure of control over the expenditure. Apart from the consideration of the amount to be paid for any given service there is the question of how much of the more expensive treatment it is reasonable to encourage. In the days of National Health Insurance the criterion was "reasonable masticatory efficiency" and this was found to be far from satisfactory for several reasons; for example, that it implied a mechanical concept instead of physiological one, that it omitted aesthetic considerations, and that of several alternative methods of treatment, each providing "reasonable masticatory efficiency," though some would be less injurious to the tissues than others, this important fact was not necessarily given pride of place.

Under the new Health Service the criterion has been changed to "clinically necessary." According to Dorlands' Medical Dictionary clinical means "pertaining to or founded on actual observation and treatment of patients, as distinguished from theoretical or experimental." That disposes of "clinically," but what is "necessary"? There will be general agreement on broad principles but individual cases will be decided by most or all of the following five categories:—the skill of the practitioner, the attitude of the patient, the time available, the clinical experience of the examining dental officer, and the funds available.

In pathological conditions involving the bone or soft tissues, and requiring surgery, the answer is usually simple and involves only the first two of our five categories; it is when restorations of lost teeth or parts of teeth are needed that the other three come into play. Clinical necessity then becomes related not only to the removal of a present pathological condition but also to the prevention of, or absence from causing, a future pathological condi tion.

Here is the real difficulty. What is such a prophylactic viewpoint worth in terms of effort on the part of the dentist, care on the part of the patient, and cost to the State? For the skilful dentist and the understanding patient the best is always worth while; for such a dentist because only the best is really worth doing; for the patient because of the preservation of his oral health. For the State? Ideally, yes; but in practice the answer will depend upon the ability of the Treasury to meet the demands upon it. If these demands should prove too heavy then the patient should be given the opportunity of providing some of the cost. If the dentist and the patient are in agreement and the State can meet the proper charge then the remaining factor in the decision, the inspecting dental officer, should have clinical experience equivalent to those whose opinion he is judging. If he has not, then time will bring disaster.

Each advance in dental science becomes in time clinically necessary in the full interpretation of that term, and the aim of administration should be always to encourage the full use of any valuable discovery: "Clinically necessary" has no static interpretation.

The question might be asked, "What about the other phrase 'clinically desirable'?" We are unable to discuss this. Its meaning is so obscure and it is so open to such variations of interpretation from either the dentist or the representatives of the State that it should have no place in the terminology of a Health Service. If it means "grant-in-aid," as it appears to, then we understand that this is not included in the principles of the Health Service.

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Editorial

MEDICAL-DENTAL RELATIONSHIPS

At a joint meeting of the Providence Medical Association and the Rhode Island Dental Society, U.S.A., a committee of physicians and dentists was appointed to study existing medical-dental relations and to present recommendations as to how state-wide relationship, acceptable to both professions, might function and grow in character and usefulness.

The report of this Committee has been published and is most enlightening. In arriving at conclusions the Committee appraised the structural elements of each profession—their basis of education, teaching, literature, research, practice, legislation and civic relations, and such agencies as universities, medical and dental schools, hospitals, medical and dental societies, medical and dental licensing boards and civic organizations.

It was felt that intimate cooperation between the two professions is essential for the promotion of the public welfare. Dental students and some dentists should have a better medical understanding, and medical students and physicians should have a better dental understanding. Medicine and dentistry already have similar motives and aspirations and many of their problems are interrelated. They need only coordination.

It is pointed out that if a dentist has adequate knowledge of the value of clinical medicine he is able very often to detect early symptoms of ill health outside the range of oral treatment and that a physician should know the simple and basic facts of dental structure and development. He should note dental defects and diseases and consult with dentists about the advice which should be given for the prevention and treatment of dental diseases and defects; that the biological sciences are a common foundation for both

medical and dental education. Dentists should have adequate didactic and clinical instruction in medicine, surgery and associated specialties such as cardiology, dermatology, urology, hemology, pediatrics and nutrition, and that medical and dental societies should set up educational programs by means of which dentists may collaborate with physicians in these fields.

The report emphasizes that a hospital with a well organized medical-dental clinic and staff is essential to any program which requires an atmosphere of scientific and professional learning; that most hospitals should improve, expand and reorganize their dental departments to equal their medical departments in teaching, research and service. More cooperation should exist also in problems of research.

To accomplish these objectives it is suggested that there be planned seminars, round-table discussions, conferences, prepared essays, programs for study and discussion at separate and joint meetings of the medical and dental societies, publication of interesting cases in medical and dental journals, medical and dental health programs in schools, welfare organizations and community centres, and advertised in newspapers, magazines and radio talks. It is believed also that such a program, sponsored by competent and up-to-date physicians and dentists will command a considerable amount of public interest.

The Committee feels that acceptance of the report and its recommendations could bring about more consultation, better understanding and closer contacts, both professional and social. Also it should develop wider knowledge and better application of the biological phases of medicine's and dentistry's interrelated procedures, assure intimate understanding of the dignity and importance of each field of practice, and thus preserve the autonomy of medicine and of dentistry through a philosophy of coordination without subordination.

The Rhode Island State Dental Society points out that this is the first time in the history of medicine and dentistry that a state medical society and a state dental society have pooled interests to blueprint, assemble and actually put in motion the mechanism of an acceptable medical-dental relationship, a blueprint which they hope will be acceptable to and operated by all state medical and dental societies throughout the country. Already this Rhode Island Dental Society, under the auspices of Brown University, is committed to giving a course of lectures this spring that will be open to both physicians and dentists and at which prominent members of the faculties of medical schools will discuss oral tumours, blood dyscrasias, nutrition, oral infection and pediatrics as they relate to the practice of dentistry.

These professional societies of Rhode Island are indeed to be congratulated upon taking this definite forward step which is so necessary if the national health service is ever to reach the standard to which the public is entitled.

Recently the American Medical Association and the American Dental Association appointed a joint committee to promote interrelations of the two

professions in education and practice. The Council on Education and Hospitals of the American Medical Association has advocated the inclusion of dental departments in hospitals throughout the country. The Council on Education of the American Dental Association also has supported the measure by setting up standards for hospital dental internships and residencies.

In Canada the Council on Dental Education of the Canadian Dental Association has set forth certain standards bearing on this question. A recently published pamphlet states that cooperative relationships should exist between the dentist and medical faculties of the University with a common meeting ground within the hospital which should lead to cooperation among graduates of both faculties to the benefit of the public as a whole. It is also stated that in the interest of health service for the public a body of knowledge belonging to the diagnostic field and related to the oral cavity needs to be equally transmitted to the students of the medical and dental faculties in order that full cooperation may exist among graduates.

These general trends indicate emphatically the need for further growth and wider application of the biological phases of dental practice. M. H. G.

BOOK REVIEWS

Dentistry For Children by Brauer, Higley, Massler & Schour, 417 pages. Published by The Blakiston Company, Philadelphia, Canadian Agents — Doubleday Publishers, 105 Bond St., Toronto 2, Ontario. Price $8.50.

A second edition of Dentistry for Children has now been published with some notable additions.

Doctors Maury Massler and Isaac Schour, both well known authorities, have been added as editors and have made fine contributions to the text. Other sections have been expanded and re-written in the light of newer knowledge.

The longest chapter, twice as long as any other, deals with the subject of preventive orthodontics. This is in keeping with the significance of the subject in modern health programs for dentistry. Preventive orthodontics has fallen into a gulf which badly needs bridging. The general practitioner has neglected the area believing orthodontics belongs to the specialist; the orthodontist does not see the patient at the proper age and hence the neglect of the child. The subject is well presented in logical sequence—growth to normal, aetiology of the abnormal, and treatment.

Part I of the book deals with the fundamental considerations in the practice of dentistry for children. Part II covers the technical procedures in the practice of dentistry for children.

A new era for dentistry is rapidly developing in which the concept of practice is changing from a concentration on adults to emphasis upon children. This book provides a source of knowledge which is valuable to the progressive practitioner.

The volume is well illustrated and the subject matter is presented in a most readable form. DON W. GULLETT

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Dentistry in Public Health, by Walter J. Pelton, B.S., D.D.S., M.S.P.H. Senior Dental Surgeon, U.S. Public Health Service, Colorado, and Jacob M. Wisan, D.D.S., M.S.P.H., Director, Joseph Samuels Dental Clinic, Rhode Island State Hospital for The Dental Health Section of the American Public Health Association. 363 pages. Published by W. B. Saunders Company, Philadelphia, Penn., 1949. Canadian Agents: McAinsh & Co. Limited, Toronto. Price $6.00.

At a recent meeting of the American Public Health Association, the opinion was expressed that a textbook describing the place of dentistry in public health was sorely needed. Resulting from a resolution passed at this

meeting the present volume now appears. Undoubtedly, the book contains more information respecting dental public health than any other existing at present.

The following statement contained in the forword of the book is significant—"It may be said of Dentistry in Public Health, as Victor Hugo once remarked, that nothing in this world is so powerful as an idea whose hour has come." The growth of the dental public health concept has been slow but during recent years has rapidly assumed a position of great importance in the public health field. The gathering together of the facts published in this volume will make the book of real value to all those interested in public health.

Each chapter is written by a well-known American author upon the subject. The first two chapters deal with the setting and development of the movement in public health dentistry. The economic aspects of the dental problem are stated in a comprehensive manner. The biometrics of dental health programs have not always received proper attention, and are here outlined in definite form. Methods for conducting surveys and different types of programs on federal, state, and community levels are presented.

Preventive measures are given considerable space. The known scientific facts and the use of fluorides are fully discussed. Other preventive measures are not neglected in that nutrition and the use of laboratory tests for caries activity are adequately covered.

Information sources of dental public health facts have not been numerous. The present volume will serve a real need both as a text and reference book. D. W. GULLETT

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A Text-book of Surgery For Dental Students, edited by G. Percival Mills, M.B., B.S. (Lond.), F.R.C.S. Consulting Surgeon, General Hospital, Birmingham, and formerly Lecturer in Clinical Surgery, Birmingham University, and Humphrey Humphreys, O.B.C., M.C., M.B., M.D.S. (Birm.), F.D.S.R.C.S., F.S.A., D.L. Honorary Physician to the King, Professor of Dental Surgery, Birmingham University. 361 pages. Published by The Macmillan Company of Canada Limited. Price $4.50.

This fifth edition is a comprehensive work and quite suitable for the dental student and dental practitioner. The first chapter on Surgical Bacteriology has been rewritten and brought up to date on the use of sulpha drugs and antibiotics. The short paragraph on Surgery of the Antrum of Highmore might be enlarged on as the dental surgeon is called on to remove roots that have been accidentally forced into the antrum. This would be a valuable addition to any dental library.

DOUGLAS BROWN

ROYAL CANADIAN DENTAL CORPS NEWS

1. Army Headquarters, Ottawa, has recently announced the following promotions: Major H. L. Harris to Lieutenant-Colonel and his appointment as Deputy Director of Dental Services, and Captain F. M. Murray to Major.

Lt.-Col. Harris was graduated from McGill University in 1934, spent the next year in hospital training in Montreal and commenced practice in Kentville, N.S. in 1935. He joined the CDC in 1939, proceeded overseas with No. 6 Dental Coy. in 1942, serving in United Kingdom and Northwest Europe and returned to Canada in 1945. After 2½ years in Vancouver, B.C., he was posted to Ottawa last June as Assistant Director of Dental Services. Lt.-Col. Harris is married with two children and resides in Eastview, Ont.

Major F. M. Murray was graduated from the University of Oregon in 1925 and practised in Calgary, Alta. He was appointed to the C.D.C in 1940, and proceeded Overseas in 1942 where he was stationed with the R.C.A.F. He was promoted to Major in July, 1944, and repatriated to Canada in 1945, where he resumed private practice in Calgary. Re-appointed to the R.C.D.C. in September, 1947, as Captain, he was posted to HMCS "Naden" Esquimalt. Major and Mrs. Murray reside at Victoria, B.C.

2. The following routine changes of Command in the R.C.D.C. will be completed by early June:

Lt.-Col. W. E. Meldrum, O.B.E.—Deputy Director Dental Services (Navy) to assume command No. 12 Coy. R.C.D.C. (R.C.N.), Halifax.

Lt.-Col. F. J. MacLean—O.C. No. 12 Coy.

R.C.D.C. (R.C.N.), Halifax to assume command No. 11 Coy. R.C.D.C. (Army), Calgary.

Lt.-Col. F. R. Drewery—O.C. No. 11 Coy. R.C.D.C. (Army), Calgary to assume command No. 13 Coy. R.C.D.C. (R.C.A.F.), Trenton, Ont.

Lt.-Col. R. E. Carroll—O.C. No. 13 Coy. R.C.D.C. (R.C.A.F.), Trenton, Ont., to assume appointment of Deputy Director of Dental Services, A.H.Q.

Lt.-Col. Meldrum was born in Morrisburg, Ont., was graduated from University of Toronto in 1923 and practised in Ottawa. He served in the R.C.N.V.R. in World War 1914-18 on patrol duty and as Flag Lieutenant at Halifax. He was appointed to the C.D.C. in November, 1939 and has been associated for most of his service with dental services in relation to the R.C.N., and has been Deputy Director of Dental Services (Navy) since April, 1944. In recognition of his services in the Second World War he was awarded the O.B.E. in the King's Honour List, June 1946.

Lt.-Col. and Mrs. Meldrum will reside in Halifax.

Lt.-Col. MacLean is a native of New Glasgow, N.S., was graduated from University of Toronto in 1923 and practised in Prince Albert, Sask. He served with the P.P.C.L.I. in World War 1914-18, including two years in France. He was appointed to the C.D.C in June, 1940, proceeded overseas with No. 6 Coy. R.C.D.C. of the 4th Canadian Armoured Division in September 1942. He served in the United Kingdom and with the R.C.N. at sea, and returned to Canada in July 1945. He was promoted to Lieut.-Colonel in December, 1945 and has been commanding No 12 Company R.C.D.C. (R.C.N.) since April 1947.

Lt.-Col. and Mrs. MacLean have four children. They reside at Calgary.

Lt.-Col. Drewry is a native of Warkworth, Ont., was graduated from the University of Toronto in 1918 and practised in Cobourg, Ont. He served with the 22 Medium Battery R.C.A., N.P.A.M., and was Officer Commanding at the commencement of the Second World War. He transferred to the C.D.C. and proceeded overseas in July, 1940. He was Command Dental Officer (R.C.A.F.) United Kingdom throughout his overseas service and returned to Canada in 1942. He has since held various appointments in the C.D.C. in Western Canada and has been Officer Commanding No. 11 Coy. R.C.D.C. (A.F.) since 1 October, 1946.

Lt.-Col. and Mrs. Drewry have three children: Major J. L. Drewry, D.S.O. at present attending the 1949 Staff Course at Camberly, England; Robert in Vancouver, and Margaret at home. Another son, Captain Fred Drewry, M.C., was killed in action during the last war.

Lt.-Col. Carroll was born in Toronto, was graduated from the University of Toronto in 1927 and practised in Toronto. He served in World War 1914-18 as a pilot in The Royal Naval Air Service and the R.A.F. He was appointed to the Toronto Scottish Regiment N.P.A.M. in September, 1922 and attained the rank of Major. He transferred to the C.D.C. in November, 1939 and proceeded overseas in January, 1940. He was appointed Officer Commanding No. 3 Coy. C.D.C. May 1, 1942 and served in Sicily, Italy and Northwest Europe, returning to Canada in June 1945. He was appointed District Dental Officer, Military District No. 2 and retained that appointment until assuming command of No. 13 Coy. R.C.D.C. (A.F.) on 1 October, 1946.

Lt.-Col. and Mrs. Carroll will reside in Ottawa.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

Address by Hon. Paul Martin Minister of National Health & Welfare

The Ottawa Dental Society is to be congratulated upon its activity in organizing a very successful Children's Dental Health Day. Hon. Paul Martin's address, which appears in this issue of the Journal summarizes the present position of dentistry in relation to the Federal grants. An opportunity is offered, not possible previously, for dentistry to move forward through the use of these available grants. Note particularly, under the grant for crippled children that malocclusion is indicated. In certain states malocclusion is now considered under the category of crippled children. Some progress in making use of these grants for dentistry has occurred across Canada but a great deal more constructive

action could be undertaken in every province to the great advantage of dentistry. The preventive approach to the problem of dental diseases, contained in this address, is most commendable.

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Executive Decides New Headquarters Essential

The Executive Committee met in Toronto on February 28 and March 1.

The Advisory Committee reported a study of possible arrangements for securing increased headquarters facilities for the Association. Unanimous agreement was reached that the present facilities are entirely inadequate to carry out the essential activities demanded of the Association. The securing of necessary funds remains the chief obstacle. The Advisory Committee was directed to proceed in their efforts and to present a budget, including both cost of proposed headquarters together with maintenance costs, and necessary staff, at the annual meeting in June.

Many matters of importance were considered, among which were the following:

List of Members—a list of members is to published early in 1950 giving the name, the year of graduation, the school graduated from, and the address of each member.

The Journal—the rising costs of publication of the Journal are viewed with alarm. The Journal is now published with a considerable loss on every issue.

Annual Convention—a complete report of program for the annual meeting was considered and the committee in charge was complimented for their painstaking efforts. All arrangements are well taken care of, for the Convention at Saskatoon on June 5-8.

Group Life Insurance—after two years' comprehensive study of the advisability of instituting a group life insurance plan, the special committee placed all the available facts before the Executive and requested further direction. As a result, the special committee was directed to present a report at the annual meeting stating the results of their study together with the recommendation that the matter be tabled.

International Dental Federation—after consideration of extensive correspondence the Executive decided to recommend that membership on a basis of individual membership, as directed at the last meeting of the Board of Governors, is impracticable, and further, that participation as a National Committee in the F.D.I. is only feasible upon the basis of a grant.

Petition in Respect to Rent Controls—a petition signed by over 200 members of the profession was presented. The petition requested the C.D.A. to intercede on behalf of the petitioners in order to have rent control continued for those practitioners who have combined residences and offices. A review was made of the policy of the Association in respect to controls. It was pointed out that the Association had opposed the institution of controls over professional fees and other matters relating to members of the profession. It was felt that the presentation of this petition would constitute a reversal of general policy and as a consequence no action was taken.

Publicity—the matter of Association publicity, both to the public and C.D.A. members, was discussed. Although present publicity was considered unsatisfactory it was felt that little more could be done until the Association possessed increased facilities.

The budget for the current year was drawn, arrangements for the forthcoming meeting of the Board of Governors at Saskatoon were considered, and many other minor matters were dealt with.

Advisory Committee on Health Appointed

On the request of the Federal Minister of National Health an advisory committee on Canada's Health Program has been appointed. The committee is to act in an advisory capacity to the Federal Department. President Merkeley has appointed the following: Drs. Harvey W. Reid, Chairman; Gustave Ratté, G. V. Fisk, Aberdeen McCabe, Don W. Gullett.

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President's Eastern Tour

The President, accompanied by the Secretary, addressed a series of meetings in Eastern Canada during the last two weeks of April.

Subjects:

The Objectives of the Canadian Dental Association—President Merkeley.

The British Plan for Dental Services—The Secretary.

Meetings were arranged as follows:

New Brunswick Dental Association—Saint John, Tuesday, April 19.

Nova Scotia Dental Association—Halifax, Wednesday, April 20.

Prince Edward Island Dental Association—Charlottetown, Thursday, April 21.

La Société de Stomatologie de Québec — Quebec City, Monday, April 25.

La Société Dentaire des Trois Rivières — Trois Rivières, Tuesday, April 26.

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The Health Survey

One of the several federal health grants available to the provinces is known as the Health Survey Grant. The purpose of this grant is to enable each province to survey all existing health facilities and make recommendations for the improvement of health facilities. These two points are specifically stated in the terms of the order-in-council of the Federal Government as follows:

> " . . . for making a survey in the province of existing health, hospital and related facilities and services."
>
> " . . . to furnish a report on the survey with a plan for the improvement, extension and establishment of such health, hospital and related facilities and services as will ensure the most effective development of adequate health services for the population."

The provinces have passed orders-in-council setting up committees to conduct these surveys. The arrangements made vary somewhat from province to province but the survey is now being conducted and will be completed within the present calendar year. Dentistry should be adequately represented on each provincial survey committee. Accurate information respecting dentistry should be placed on record. An opportunity is afforded for the dental profession to state recommendations for the future. Adequate funds are supplied to provide for a complete survey. In the dental field all phases should be covered including personnel, education, public health, hospital, distribution of services and all other matters relating to dentistry, as a health service.

In due course the survey report will be published and undoubtedly furnish a guide to movements in the health field for years to come. It is imperative that dentistry occupy a fitting position in this report. If experience of the past can be taken as a guide the importance of dentistry, as a health profession, will be judged by the content of this report.

When these grants were announced, we urged that provincial dental organizations have representatives appointed upon the central body of the province. In some provinces adequate representation has occurred on the main committee. In others a dental sub-committee has been set up to advise the central organization. No matter which arrangement has occurred it is necessary that those appointed take the task seriously. An accurate assessment of present dental health facilities cannot be made by others than members of the dental profession.

Future planning for dental health services is exceedingly important. Among the anticipated recommendations will be statements on the following:

1. Needs in respect to personnel.
2. Distribution of personnel.
3. Facilities for dental education.
4. Dental public health programs.
5. Relationship to hospital service.

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Library

Grateful acknowledgement is made to Dr. S. A. Moore, Past-President, for his gift to the Association of bound volumes of the Journal of the American Dental Association (Volumes 10 to 33). The Association is gradually building a reference library and these volumes are a great asset.

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Past-President Conboy Dies

Doctor Frederick Joseph Conboy, who served as President of the Canadian Dental Association 1928-29, died on March 29, 1949. Obituary notice is appearing in this issue of the Journal.

NEWS FROM THE PROVINCES

QUEBEC

Mount Royal Dental Society of Montreal

This Society held its March General Meeting on the 18th at the Mount Royal Hotel. The meeting took the form of an all day clinic and the clinician was Dr. Irving Salman of New York.

His topic for the day was "Oral Surgery" which he covered in a very interesting manner with the aid of films and slides. His

films on "Conductive Anaesthesia" which illustrated both the intra-oral and extra-oral methods were highly instructive.

NOVA SCOTIA

Halifax Dental Society

The March meeting of this Society was well attended, Dr. Christie, the president, being in the chair. After several questions of local interest had been discussed, Dr. Christie introduced the speaker of the evening, A. G. Nutley, M.D., D.D.S., whose subject was "Tumours".

The following is a synopsis of this instructive and ably delivered address:

The first part of the paper dealt with tumours in general terms. It has been pointed out that sometimes a sharp borderline of distinction between tumours and tumour-like formations is difficult to draw. Microscopic slides have demonstrated this fact. The second part of the paper discussed the oral epithelial tumours of dental origin. This was the title and the main subject of the paper. A brief description of the single embryonic stages of tooth development served as a basis of interpretation as to the character and origin of these oral tumour formations. Schematic figures together with microscopic slides of the two examples of these pathological formations — Odontogenic Cysts, Adamantoblastomas — completed the descriptive part of the presentation. The speaker's demonstration of taking a biopsy on a wet specimen, followed by questions and discussions from the floor, concluded the program of the evening.

BRITISH COLUMBIA

Periodontia for the General Practitioner

Outline of Address presented before the Vancouver and District Dental Society in March by Dr. D. P. Mowry, Dean Faculty of Dentistry, McGill University.

When considering the problem of diseased gingivae (gums) there is a simple statement which brings treatment into correct focus. The statement is—All gingival lesions are promptly cured by the extraction of the teeth. The hypothesis must therefore be that the cause of gingival lesions as seen by the general practitioner is the tooth or teeth. If this hypothesis be accepted it is correct to conclude that conditions existing in and about the teeth which parallel the gingival condition when the teeth are absent should assure an absence of gingival disease. In the experience of periodontists this is certainly true except for the relatively rare cases of advanced systemic disease.

The more recent graduates with a foundation in histology and pathology are fully aware of the basic law of the integrity of ectodermal tissues. The tooth is ectodermal in origin and for many years in actual fact the enamel is in organic union with the proximal gingival tissue, the covering of which, the epithelium, is ectodermal in origin. To the dentist without this histological knowledge the above statement simply means that the integrity of the gum surface is unbroken in the gingival crevice and at the junction with the tooth and there is of course no bleeding or seepage of serum or pus. To put it more diagramatically the gums should join the teeth in much the same secure manner in which the healthy cuticle joins the base of the fingernail.

Everyone is aware of the common occurrence of bleeding gingivae. What shall we do about it? You all know what should be done. Ever since the time of Riggs the gospel of scaling the gingival third of the teeth has been proclaimed by those who have successfully treated this condition. The problem as to why the dentist does not scale the teeth must be answered by each of you individually. With a variety of antiseptics—for example Metaphen 1:200 parts—the gingival crevice can be made a safe field in which to surgically clean the surface of the tooth right to the base of the gingival crevice. If the gingival crevice has become a pocket the elimination of unsupported gingival tissue is a simple surgical excision involving much less trauma than the extraction of a tooth. The application of a surgical pack immediately after excision and maintained with occasional replacement for three weeks will prevent the excess growth of granulation tissue and provide a mild antiseptic surface under which connective tissue may heal and become covered with normal stratified squamous epithelium. After three weeks more or less the application of surface stimulation, gradually becoming more severe, will develop a tough hornified covering much like the surface of the palm of the hand. The adjustment of the occlusion by grinding or restoration of the crowns of the teeth so that the resultant of functional forces is in line with

the long axis of the teeth is an essential part of all periodontal treatment and indeed should be checked carefully in all adult cases and of malocclusion.

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Vancouver and District Dental Society

The usual high standard of meetings of this Society was maintained at the April meeting, when Dr. Gustave Rapp, Professor of Biochemistry and Physiology at the University of Illinois, spoke on what he calls "Materia Dentica." Dr. Rapp addressed both afternoon and evening meetings, and, in addition conducted a two day course for a number of interested members of the Society.

A course on Children's Dentistry, to be conducted by Dr. J. C. Brauer, of the University of Washington, is announced to begin in Vancouver at the end of April, to continue for some months, during week-end periods to be announced later.

A course on Oral Pathology and Periodontia is currently under way in Vancouver, conducted by Dr. B. O. A. Thomas, of the University of Washington. The series of about eight lecture periods will be followed by practical demonstrations, toward the conclusion of the course.

Members of the profession in this Province have been invited to attend several meetings sponsored by the Northwest Conference in Dental Medicine. These meetings present an opportunity for several men in this Province who are particularly interested in this phase of dental practice, and there is a growing tendency toward increased interest in these subjects on the part of many general practitioners.

Many British Columbia dentists will look forward to attendance at the C.D.A. Convention in Saskatoon in June, but there will be some division of our group, since other attractive conventions will be held across the line at about the same time. The great American cities of the north-west States are easily reached in a few hours by car from Vancouver, or by boat from Victoria.

The Journal of the C.D.A. does get around, it seems. We had a letter recently from a Doctor Luis Cervera, of Barcelona, Spain, stating that he had read of the Bulletin of the British Columbia Dental Association in the Journal, and asking for a sample copy of the Bulletin.

ALBERTA

Edmonton and District Dental Society

A meeting of this Society was held at the MacDonald Hotel on March 1, 55 members being present.

Dr. R. A. Rooney gave an excellent talk on Cast Base Porcelain Crowns emphasizing the following:

(1) It pre-supposes proper endodontic treatment and fortunately a rational procedure for such treatment has been developed.

(2) It is not a new technique, but one originated forty years ago by J. Hart Goslee, which fell into disuse through improper root canal treatment.

(3) A porcelain crown, based on the Goslee design, made by the Columbus Dental Manufacturing Co. under the trade name "Tru-Bridge" is available for it. It is probably the strongest porcelain restoration available, and from an aesthetic standpoint is one of the finest techniques we have.

(4) It eliminates in many cases, the need for cutting into adjoining teeth for retention for a fixed partial denture.

Dr. R. A. McEwen gave a well illustrated lantern slide lecture on Interdental Measurements in Complete Dentures for the Average Practitioners, pointing out that no special equipment was required and that accurate results were obtained in a minimum of time.

The method was presented by the aid of slides in the following sequence.

(1) Preliminary bite.

(2) Discussion on interdental space.

(3) Necessity of a protusive bite and adequate adjustments on the articulator.

(4) A grind-in technique with discussion on muscular and condylar control.

(5) The set up of artificial teeth.

(6) The try-in.

(7) The processed dentures and a method of spot-grinding and final grind-in using both articulator and patient.

The main features of the technique are:

(1) Correct centric.

(2) Lateral and protrusive movements under contral on the articulator.

(3) An adequate grind-in.

(4) Good results with a minimum of time.

These two talks were well received by all members present and considerable enthusiasm shown.

This society held a very interesting meeting in the McDonald Hotel on April 6 with seventy-five members in attendance. The meeting took the form of a clinic on "Lesions Found in the Oral Cavity" with special reference to their diagnosis, by Dr. H. R. McLean, Professor of Operative Dentistry, Univ. of Alberta.

The following is a synopsis of this clinic:

"The increased scope of dentistry and the additional obligations and responsibilities of the practitioner were discussed. The principles involved in diagnosis and treatment planning were dealt with and the importance of consultation, history taking, the use of laboratory findings and doing biopsies, stressed.

"A number of lesions found occurring in the soft tissues were then described. These included the fusospirochetal groups, allergies, the tongue lesions, skin lesions, signs of avitaminosis, oral lesions associated with diabetes, blood dyscrasias, syphilis, and other granulomata, oral lesions in children and swellings of the oral mucosa.

"Because the patient often appears in the dental office first, regular examination, careful records including case history and early recognition of lesions in their incipiency, is the responsibility of the dentist. A number of slides of oral lesions were projected, described and discussed."

The registration for this clinic took place at 1.00 p.m. with the clinic itself starting at 2.00 p.m. After the clinic, there was the usual social hour. Dinner was served at 7.15 p.m. After dinner, Dr. Merv. Huston, Director of the School of Pharmacy, University of Alberta gave a very humorous and illuminating address on the "Past Experiences of a Pharmacist." The whole meeting was of a very instructive nature and a vote of thanks was extended to the clinician for his very able presentation of a very difficult subject. W. E. A.

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Calgary Dental Society

The March meeting of this Society was held in the Palliser Hotel.

This year's largest turnout of members was present to hear "The McGrane Technique for Full Denture Prosthesis" presented by five members of the Edmonton and District Dental Society: Dr. Harold Knight, Dr. Vic. Lloyd, Dr. Hudson Scott, Dr. Stan Hodgson, and Dr. Bill Jensen.

This group of able clinicians "took over" the meeting and completely held the interest of all attending, throughout both afternoon and evening sessions of their grand presentation.

Their thorough knowledge of and their dynamic enthusiasm for this technique made this meeting one of the most enjoyable ever held by this society. W. E. A.

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Lethbridge & District Dental Society

On March 9 this Society sponsored a clinic by an Edmonton Study Group on the McGrane Technique for full dentures. The Group consists of Dr. V. Lloyd, Edmonton; Dr. Harold Knight, Edmonton; Dr. S. Hodgson, Edmonton; Dr. H. Scott on the staff of the Oliver Mental Institute, and Dr. Wm. Jensen of Wetaskiwin.

The clinic was well attended by out of town dentists, including Dr. R. Campbell of Fernie, B.C.; Dr. R. Burgman of Blairmore; Dr. A. Goodman of Coleman; Dr. W. G. Willigar, Pincher Creek; Dr. R. L. Falconer, Macleod; Dr. W. H. Geering, Cardston and Dr. Robert Lynn of Taber.

The study Group is to be commended on the masterful presentation of the technique.

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Edmonton Dental Nurses' & Assistants' Association

The February meeting of this Society was well attended, and all enjoyed a series of beautiful coloured films depicting the four seasons, followed by some interesting animal shots. Both were shown by the Junior Chamber of Commerce.

A rummage sale was held in March for the purpose of raising funds, and the outcome was very successful.

Members and friends co-operated by donating various articles and a hilarious and profitable afternoon was enjoyed.

This Association has started a registry for the purpose of contacting young ladies who wish to become either part or full time dental assistants, and for the convenience of city dentists. JEAN CAMPBELL

SASKATCHEWAN

Saskatoon Dental Society

This Society held its regular meeting on March 15 at the Bessborough Hotel. The

guest speaker of the evening was Dr. A. E. Buckwold, a local pediatrician. Dr. Buckwold presented as his topic, first the problems regarding thumb sucking in children and second, nutrition in children regarding their dental health as well as their general health. His talk was most interesting in that he brought out many facts pertinent to a better understanding of the child from both the dentist's and the pediatrician's standpoint.

The president, Dr. Hallett, then gave his report on the Board of Governors' meeting which he recently attended in Toronto. Plans for the forthcoming convention in Saskatoon were coming along very favourably. The local committee chairmen made their individual reports and it appeared that the plans were just about finalized. It was hoped that all dentists who planned to attend would make their reservations in the very near future so that there might not be any disappointments.

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Dr. Holmes Honoured

Dr. G. E. Holmes of Prince Albert, Sask., completed 50 years of dental practice on March 24 and was the guest of honour at a dinner held by the Prince Albert Dental Society at the Prince Albert Club. He was presented with a gift and an illuminated scroll by Dr. G. B. Howard on behalf of the Prince Albert Dental Society.

Dr. Holmes was graduated from the Royal College of Dental Surgeons of Ontario in 1899. He first practised in Ontario and moved to Saskatchewan in 1906. He was a member of Saskatoon City Council for a number of years. He moved to Prince Albert in 1938 and has practised there since then.

Special guests at the dinner were Mayor J. M. Cuelenaere, K.C., Dr. R. W. Kirkby representing the medical profession; F. C. Campbell, representing the pharmacists; Dr. E. C. Campbell, representing the Saskatoon Dental Society; Charles Goddard, dental technician, and George Carr, President of the Prince Albert Club.

MANITOBA

Winnipeg Dental Society

The Winnipeg Dental Society held the last meeting of the 1948-49 season on April 11 in the Royal Alexandra Hotel. It was a very well attended gathering showing the interest in the reports to be brought in by the several committees appointed at the beginning of the season to study public relations, socialized dentistry, illegal dental practice, Dental Acts and institutional dentistry. All of the reports were excellent progress reports and occupied the whole afternoon from 2 to 5.30. The Society is to be highly commended for setting up these committees. The origin of the idea is credited to Dr. Jos. Rumberg who has been on the executive of the Society for several years and the Secretary during the current fiscal year.

About 50 members of the Society comprised the committees and this activity indicates a very creditable interest in matters affecting dentistry and public welfare. It is expected that the committees will continue their studies and their success will no doubt encourage others to their numbers.

The evening was occupied after dinner in the hotel by a business meeting and election of new officers for the 1949-50 season. The afternoon and evening sessions were presided over by Dr. W. Ivan Jackson, president of the current year. The new officers are: President, Dr. Bert Oja; Vice-President, Dr. Jos. Rumberg; Secretary-Treasurer, Dr. Ernie Wallace; Chairman of clinic committee, Dr. J. Orwell Brown; Executive members, Drs. F. W. Jones and A. V. Johnson.

The curling section of the Winnipeg Dental Society completed their activities for the year on March 15, at the Granite Curling Club, with an all day bonspiel of three games and a dinner at night.

Following the usual custom, the ten rinks had curled each Wednesday throughout the season. Interest and enthusiasm were keener than ever.

The innovation of an all day bonspiel for a wind-up proved a complete success. Dr. Paul Le Fleche and his three musketeers emerged from the shooting war as victors. The quartet skipped by Dr. Fred Brown, way out in front during the regular season failed to heed the warning "beware, the ides of March" and finished up in second place. The four horsemen, headed by Dr. William Robb, came fast in the stretch and provided a photo finish. They took third place.

A complete turn out of forty curlers for a full season's activities augers well for the permanence of this competition.

ONTARIO

Dr. F. J. Conboy

The passing of Dr. Fred J. Conboy removes a well known personage from Ontario professional and public life. For several months he had not enjoyed his usual vigorous health. This was precipitated by an accident almost a year ago yet he continued to carry on until March, when he was admitted to hospital for observation and treatment. He did not rally but died March 29.

Dr. Conboy was a native of Toronto and a dental graduate of 1904. He was a man who gloried in public service and in this connection served in many capacities.

After graduating he began private practice and almost immediately became interested in education and public life. He served as a member of the Toronto Board of Education from 1904 to 1914 with one term as chairman. In 1917 he became Professor of Dental Praxis in the College of Dentistry, a post he retained until 1946. In addition to this he was invited to join the staff of the School of Optometry in 1935.

These activities were stepping stones to many important posts. He served on the Board of Governors of the Ontario Dental Association, for a long period as secretary and one term as president. He was president of the Canadian Dental Association in 1928-29. He was appointed Director of Dental Services for the Province of Ontario in 1925 which position he held for many years.

In 1935 he became active in Toronto civic affairs. In that year he was elected alderman for Ward 7. He was re-elected the following year, then stepped up to Controllership for the next four years and in 1941 he was elected Mayor of the City which position he held for four years.

As Toronto's wartime Mayor Dr. Conboy was an efficient servant of the City and made many fine contributions. He began the campaign for better housing, which has resulted in such projects as Regent Park. He was responsible for initiating interest in slum clearance, relief works programs, public health education, improved street lighting and city planning. During his fourth term as Mayor he was elected President of the Canadian Federation of Mayors.

Such are a few highlights of Dr. Conboy's public life. In addition to this he had time for a very active interest in his Church. He was a charter member and an Elder of Westmoreland United Church and for many years he was superintendent of its Sunday School. He was a Mason, a member of the L.O.L. and the I.O.O.F.

Indeed his was a full life with wide interests. He was a man of ability, great energy, and of a genial and friendly disposition. His death is a great shock to a legion of friends both within and outside the dental profession. To his widow Mrs. Lilian Conboy and his son Alvin goes the sympathy of all who knew him.

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Faculty of Dentistry News University of Toronto

The graduating class dinner was held in the Great Hall of Hart House on April 6 when the Chancellor, the Right Honourable Vincent Massey was guest speaker and President Smith was among the honoured guests.

Extra Mural lectures given in March were: Dr. R. J. Godfrey at Peterborough Dental Society; Dr. Douglas Tanner at Renfrew County Dental Society at Renfrew.

Dr. W. G. McIntosh and S. A. MacGregor were guest essayists at the seventh district dental society of New York at Rochester on Mar. 21, 22.

Dr. J. P. Walsh M.B., B.S., D.D.Sc. (Melb.), L.D.S. (Vic), Dean of the Dental School, Otago University, New Zealand, was a guest of the Faculty, March 14 and 15. He is making a survey of dental schools in Canada and United States gathering information.

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New Head in Orthodontics

Dr. Robert E. Moyers, who parachuted into Greece to organize the medical service of the Resistance Movement during the war, has accepted a teaching and research post at the University of Toronto. He will head up the department of orthodontics in the Faculty of Dentistry.

Announcing the appointment, Dr. Sidney Smith, University of Toronto president, called him "one of the most promising of the younger dental scientists in the United States." He was also one of the most decorated officers in the U.S. Army Dental Corps, Dr. Moyers was wounded in action three times and spent more time behind enemy lines on a specific mission

than any other American officer. After serving as chief medical officer with the Allied Military Mission in Greece, he became advisor to Military Liaison and UNRRA, directing relief and medical services in one of the devastated provinces.

Dr. Moyers is 29 and unmarried. His academic degrees (B.S., chemistry; M.S., orthodontics and child welfare; D.D.S.) were obtained at the State University of Iowa where he is completing work toward a Ph.D. in medical science, majoring in muscle physiology. He is at present on the staff of that University as associate in orthodontics.

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Academy of Dentistry Toronto

The final meeting of this association was held in the theatre of the Royal Ontario Museum on April 13 with Dr. J. H. Johnson presiding. Dr. John R. Thompson of the Department of Orthodontics at North Western University, Chicago, was the guest speaker and he chose as his subject—The Rest Position of the Mandible and Its Significance to Dental Science and Practice.

Dr. Thompson gave his presentation from lantern slides which he prepared to illustrate his findings from his studies and research in this problem. The discussion was informative and particularly helpful to dentists dealing with problems in mouth reconstruction arising from either the complete or partial loss of teeth and other causes. Difficulty is always experienced in determining precisely the correct amount of bite opening for comfort and good esthetics and it is essential to have a basic starting point from which to proceed.

The speaker presented proof that the "Rest Position", of the mandible was such a basic point. From this the vertical dimension can be computed accurately because it is a natural relationship of the jaws which is always constant throughout life irrespective of changes that occur in the acclusal relationship of the teeth.

The average vertical dimension is about 3 millimeters shorter than the rest position but it might vary one millimeter either way depending on the age of the patient. The free way space between the teeth is usually larger in older people.

The essayist pointed out that if the vertical dimension was taken to be greater than the proper relationship with the rest position, various unpleasant symptoms would arise, e.g., pain from tired muscles always in strain, and a breaking down of alveolar structures because of the tendency for the muscles to close the bite to normal. It is apparent then that if too great a bite opening is made complete failure of the mouth reconstruction operation may be expected.

In conclusion the speaker suggested that dentists should change their approach from one of "Bite Opening" to that of "Restoration of the Normal Bite Relation."

At the end of the meeting President Dr. Johnson called on Dr. Edgar White, the President designate for 1949-50 and presented him to the meeting as the new president. Dr. White in turn read the names of his fellow officers on the council and introduced them to the members.

The new slate of officers for the term 1949-50 are announced as follows:

President—Dr. E. A. White
Hon. President—Dr. J. H. Johnson
Pres.-elect—Dr. Earl Bancroft
Treasurer—Dr. Mark Boyes
Secretary—Dr. Gordon L. Frawley
Councillors—Dr. W. A. Shand, Dr. E. J. Henderson, Dr. R. C. Moore, Dr. J. S. Wilkinson and Dr. A. R. Scott.

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Niagara Peninsula Dental Association

At the annual meeting of this association held on March 11, the following officers were elected: President—Dr. E. C. Butcher, Port Colborne; Vice-President—Dr. G. K. Chapman, Fort Erie; Secretary—Dr. K. Carroll, Port Colborne; Treasurer, Dr. W. Feasby, Merritton; Directors, Dr. F. E. Dawe, St. Catharines; Dr. Charles Wray, Beamsville.—Niagara Review.

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Ontario Dental Nurses' and Assistants' Association

The Executive of this Association held their meetings this past term in Toronto.

The meeting held on April 2 and 3 was opened with dinner at the Wentworth Arms Hotel and was attended by eighteen members.

The business sessions were held in the Medical Arts Building and convened by the Ontario President Miss Helen Campbell.

This will be our Eighteenth Annual Con-

vention under the convenorship of Miss Lois Easton and it will provide a program of great importance to all members of the Association.

This year we "Come of Age" and we hope every Dental Nurse and Assistant will be able to attend in Toronto on May 15, 16, 17 and 18. The Reception Sunday evening in the official suite with Loretta McCaughey and Anne Kirkland our Bulletin Editors as Hostesses.

Come to Convention . . . Gain new friends . . . Renew acquaintances.

MILDRED EMMERTON,
Publicity Convenor, O.D.N. & A.A.

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Dr. P. Allen Retires

Dr. G. P. Allen of Mount Forest has recently retired after having been in practice 58 years. Since commencing practice in 1890 he has been active in civic affairs and for a period of seven years served as mayor of the community.

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Toronto Ladies' Auxilliary

Mrs. Kate Aitken was guest speaker before the March meeting of this organization at the Royal York Hotel. President Mrs. A. T. Cooper was in the chair. The speaker was introduced by Mrs. J. E. Verth and at the conclusion of her address Mrs. D. L. MacKenzie presented her with a souvenir gift.

•

Dental Curlers Get Together

On March 12 dental curlers from Hamilton, Barrie, Brampton, Kitchener and Orangeville came to Toronto for a big night at that grand game. The party was held at the Toronto Curling Club with dental curlers from the Granite Club joining in as hosts.

After a good dinner everyone took to the ice and here is how they were drawn:

J. H. Johnson		R. J. Hiscox	
H. J. Murphy		George Campbell	
A. S. Elliott		J. A. Spellman	
J. H. Duff—	12	G. H. Campbell—	13
W. R. Jackson		J. Carroll	
J. G. Pilkey		F. M. Serena	
T. H. Graham		A. R. Poag	
A. M. Hord—	4	W. W. Baxter—	15
J. G. Perkin		D. S. Coons	
W. F. Elliott		C. T. Mason	
G. S. Murray		G. M. Philp	
G. V. Morton—	15	A. H. Dyer—	5
J. C. MacLaurin		H. Aspden	
L. D. Harris		B. M. Johnston	
C. A. McKenna		J. F. Warnica	
R. E. Diprose—	15	F. S. Spiers—	12
R. W. Marshall		D. E. Shultis	
J. M. Sheldon		C. T. Moyle	
R. S. Wollatt		L. V. Janes	
J. C. Malcolmson—	13	W. G. McEwen—	5
	59		50

The party was a success in that everyone had good curling and a good time. In a curling party at the Hamilton Thistle Club a month previous it was suggested "Why not a Dental Bonspiel?" It is funny how news gets around. Charlie McKenna even offered a trophy at the Toronto meeting to encourage the boys. He does think of the nicest things.

Anyway a committee has been formed to give the whole matter serious thought and Bert Hiscox of Brampton has promised that he would see that ice was available. Personnel of the Committee are Bert Hiscox, Harold Campbell, Art Poag, Al Hord, "Vic" Morton and Charles McKenna. It's almost a sure thing that this committee will do something.

EMPIRE NEWS

GREAT BRITAIN

Stainless Steel Instruments

Condensed from letter by H. M. Pickard to Editor of British Dental Journal in Br. D. Jour. Jan., 7.

A recent review of the instruments at present being manufactured by the dental companies show that a surprisingly high proportion of sharp instruments are now being made in stainless steel (chromium alloy). On enquiry, the reason advanced for this appears to be that the demand is high and this, from the commercial point of view, is a reason adequate enough. Such instruments as chisels, excavators, cervical trimmers, scalers and probes are commonly found in stainless steel; when the supply fails one is apt to be offered, with apologetic concern, the carbon steel article, which by implication is so clearly inferior to its stainless counterpart.

In my own experience, these stainless steel instruments have been completely unsatisfactory; their appearance is good, but beyond this

there is little in their favour. In the case of cutting instruments, any sharp edge imparted is so rapidly destroyed in use as to render frequent re-sharpening essential. Since it appears impossible to produce a good temper in this alloy, the finer instruments bend out of shape when subjected to stresses which are withstood by carbon steel and, for the same reasons, probes and seekers, which should be fine and spring tempered, are thickened to such an extent as to become useless for the purpose of exploring interstitial areas, and lacking in the springiness which is accepted as desirable in an instrument whose purpose it is to detect fine differences of texture and surface irregularities.

In view of their shortcoming, I condemn stainless steel cutting instruments as at present produced.

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Reply to Mr. Pickard's letter by Halvard J. Braekstad, Managing Director of the most famous firm manufacturing carbon steels.

Metallurgically, each steel is pre-eminent in its class, the stainless as a corrosion resister, and the carbon steel as the most efficient cutting weapon or tool. Years of development work on the Martensite stainless grades have produced moderately hard corrosion resisting steels, which constitutionally are lacking in cutting characteristics. Experiments with high carbon contents to increase the cutting powers and the hardness have yielded a material that is only semi-stainless and is extremely brittle in thin sections.

Why then do some manufacturers show preference for this less efficient type of cutting material? There are three main production points—first, the stainless grade is particularly adaptable for mass production methods such as stamping and drop forging; second, the heat treatment phase has more latitude; and thirdly, the final finish or polish requires fewer operations. But with carbon steels there are more formidable production problems. They require individual working; a peak hardening treatment; whilst the tempering process allows each portion of the tool to be in the correct metallurgical condition for the work it has to accomplish; the grinding, lapping and honing ensures the maximum mechanical efficiency. Reinforcement of the section to give strength or thinning to import springiness is unnecessary.

The craftsmanship thus put into the steel and the tool is reflected in the cutting ability and efficiency of the resultant product — a craftsman's tool in every sense.

For the sceptics, may I point out that most of us use a stainless steel weapon to attack our meagre Sunday joint, and many are the lamentations about the deficiencies of this glittering corrosion resister, as well as the smallness of the Meat! Yet 99.7 per cent of the razors and razor blades made in the world are manufactured in carbon steel! Surely a daily reminder of the cutting supremacy of the craftsman's carbon steel.

•

National Health Service Act

The dental provisions of the National Health Service Act provide a striking example of the rejection of scientific advice by amateurs for political ends.

From the earliest days, the British Dental Association has tried to teach the scientific truth that national oral health depends on early and continuous treatment and education in oral hygiene. To this end, every encouragement was given to the development of the School Dental Service. In addition, considerable financial assistance was given by the Dental Board of the United Kingdom, out of the annual registration fees of dentists, for the spreading of dental education in the schools.

The advice of the association was not accepted, and in consequence the new legislation is unscientific and too ambitious. It attempts to provide treatment for all ages with inadequate manpower. This has resulted in a breakdown of the service to the most important class, the school children, since school dentists have been attracted into the general service by the opportunity of earning higher incomes.

This weakness in planning had been realized by the association, which had recommended that free treatment of the young should be the spearhead of the attack on dental disease and that until the scheme had grown, adults should be entitled only to a grant-in-aid toward treatment. So far, the working of the act has produced an enormous demand by the elderly for extractions and artificial dentures.—Philip G. Capon, Pres. of Br. D. Assoc. in Jour. of A.D.A.

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Dentist's Suicide

A note saying "All these dental forms are driving me insane" was found beside the body

of a Derby dental technician, Leonard Renwick, 63, of Normanton-road, who was found lying on his waiting-room couch, on March 19th.—Daily Telegraph & Morning Post.

•

Woman's Death in Dentist's Chair

At a fatal accident inquiry at Aberdeen March 22 into the circumstances attending the death of a woman who had died in a dentist's chair, it was stated that in a post mortem examination that a swab of cotton wool surrounded by gauze about the size of a golf ball was found in the woman's throat. The jury returned a formal verdict that the death was caused by asphyxia brought about mainly by the inhalation of blood which occurred during the period of anaesthesia resulting from the use of ethyl chloride and nitrous oxide. — Glasgow Herald.

GENERAL NEWS

Diet and Caries

During his recent visit to Britain Professor Toverud, in the course of two lectures, reported his studies of the incidence of caries among Norwegian children prior to, during and since the recent war. In the second of the lectures he showed the striking fall of the incidence of caries in children and at the Health Station at Skedsmo which accompanied careful attention to the nutritional requirements of the mother during pregnancy.

On the other hand, in his first lecture, which was given at the invitation of the Royal Society of Medicine on January 10, Professor Toverud described the even more striking incidence of caries that occurred among the children of the Scandinavian countries during the war years. His figures show that, in spite of the difficulty in obtaining adequate supplies of the foods known to be essential for the development of teeth of good structure, the incidence of caries progressively decreased as food restrictions, and particularly that of refined carbohydrate, became greater.

—*Excerpt from Editorial in Br. D. Jour Feb.* 4, 1949.

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Armed Forces in U.S.A. Launch New Drive for Dental, Medical Volunteers

A new public relations campaign to secure volunteers to meet current shortages of dental and medical personnel in the armed forces has been launched under government sponsorship. In a special press conference at Washington, Secretary of Defense James Forrestal warned that failure of the new campaign to secure volunteers will result in "more drastic" measures such as a request for a special draft law to get dental and medical officers. Secretary Forrestal said that the armed forces would be short about 1,160 dentists and 1,600 physicians by July 1, and about 1,400 dentists and 2,200 physicians by the end of the year. Immediate target of the campaign are the 15,999 young dentists and physicians who were draft-exempt or received their professional education at government expense during World War II and have not yet seen active service. Draft legislation, if enacted, is also expected to be directed towards this group.

•

Housing Bureau for San Francisco Meeting Will Open May 1

The A.D.A. Housing Bureau which will handle reservations for the 90th annual A.D.A. session in San Francisco on Oct. 17-20, will be opened May 1 instead of July 1 as originally planned. All applications for housing at the meeting must be made on a form which will be printed in the May issue of the Journal of the American Dental Association. The applications should be sent to the A.D.A Housing Bureau in San Francisco, in accordance with instructions printed on the form.

•

New York Dental Laboratories Attack Again

Excerpts from Editorial in N.Y. Jour. of D., April, 1949.

The attack of the Dental Laboratory Association of the State of New York on the dental profession of this State continues without abatement. The laboratories have now come into the open in their attempts to wrest prosthetic service from the confines of professional dentistry. A new Bill, No. 1477, has been introduced in the New York State Senate under date of February 9, 1949.

According to this Bill, the dental laboratories of the state are to be registered by the Department of Education.

"The dental laboratory so registered, or the office thereof, shall be identified by a sign or

signs or window-lettering stating the name of the individual or firm thereof, with the title, 'Registered Dental Laboratory', to be followed by the statement, 'Serving Dentists Only'."

Just what is the purpose of the little "sign in the window?" Certainly it is not a bid for public patronage, since the dental laboratory is not allowed by law to deal directly with the public, and no self-respecting dentist could be induced to patronize a dental laboratory on the recommendation of the little "sign in the window." The "sign in the window" can serve only one purpose—constantly to mislead the public into thinking that the laboratory man is actually the one who renders prosthetic service instead, as is actually the case, that the laboratory man performs the job of mechanical processing only. Dentists can only view the Bill for what it really is—a frank attempt on the part of the laboratories to obtain for themselves professional status under the Department of Education without in any way assuming any of the professional and educational responsibilities and requirements to which the practising dentist is subjected.

In order to "develop public opinions in favour of licensing of dental technicians and registration laboratories," the Laboratory Association, in addition to the Bill which it has already been able to bring before the State Legislature, intends to continue its public radio broadcasts "and other forms of publicity."

The dental profession has been attempting to combat the insidious attacks of the laboratories through the work of the usual "committees" of dentists. Not so, the Laboratory Association. The laboratories are not depending on the service of its members but are gathering a "slush fund" for the purpose. In the letter sent to laboratory owners, they are asked to contribute $25.00 minimum for every laboratory, "plus $15.00 for each extra partner, and plus $5.00 for every processing employee."

It is time the laboratory owners realized that their attempts to obtain for themselves unwarranted legalized professional standing through attempts to disintegrate the practice of dentistry is opening a wide gulf between them and their customers—the dentists.

The Laboratory Association has chosen to pursue a course which should be recognized for what it is—an underhanded attempt to undermine the integrity of the dentist in the eyes of the public and thus to usurp the right to practice prosthetic dentistry without adequate professional educational preparation. The very life of the dental laboratory industry in the future may yet depend on the backing it receives from the dental profession.

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Washington State Dental Association

Practicing dentists from Washington and nearby states will see the new University of Washington School of Dentistry unit when they gather on the campus for the 62nd annual meeting of the Washington State Dental Association, June 19 to 23, in Seattle.

More than 1,600 dentists are expected to attend.

The meet will be highlighted by several headline clinicians, who will present technical papers and demonstrations. Two of these nationally known men are Dr. A. H. Schmidt, of the University of Nebraska College of Dentistry; and Dr. E. Carl Miller, of Cleveland.

Dr. Schmidt's paper is entitled, "Planning and Designing of Partial Dentures." Dr. Miller's paper will cover "Operative Procedure for Amalgam Fillings."

•

World Health Organization

The Soviet Union, the Ukraine and Byelorussia have notified the World Health Organization that they no longer consider themselves members of the organization, Dr. Brock Chisholm, the director general, announced February 16. The Soviet Union's withdrawal—along with those of other Soviet Republics—from the only specialized agency of the United Nations, to which it belonged, came without warning, and was a complete surprise, Dr. Chisholm said.

In world health organization circles, it was considered apparent that, in view of the record, the decision of the Russians to withdraw was a political one, the significance of which might not be known for some time. The organization is short of money and is just acquiring its staff. The Soviet Union, the Ukraine and Byelorussia have made no payment on their contributions, which total to date $350,000.—New York Times, February 17, 1949 per Public Health Economics.

Questions Value Fluoride Tablets

Care should be used in taking fluoride tablets in lieu of fluoride drinking water for prevention of tooth decay, advises the Council on Foods and Nutrition of the American Medical Association.

"The value of these tablets has had no satisfactory demonstration," it is stated by F. J. McClure, Ph.D., National Institute of Health, Bethesda, Md., in a report in the Journal of the American Medical Association. "A dietary supplement of fluoride seems to have possibilities in caries control."

•

National Conference on Training of Dental Hygienists is Scheduled for Early Summer at A.D.A. Headquarters

A two day conference on teaching programs for the training of dental hygienists will be conducted by the Council on Dental Education at the A.D.A. headquarters in Chicago on June 30 and July 1. Invited to participate are deans of dental schools now offering courses in dental hygiene, directors of schools of dental hygiene and faculty members of dental schools now considering establishing courses for hygienists. Also invited to attend are representatives of the American Dental Hygienists' Association, American Association of Dental Examiners, American Association of Dental Schools and the A.D.A.—*A.D.A. News*

•

Seek U.S. Subsidies for Dental, Medical Schools

A comprehensive program of federal aid to dental, medical and allied schools of the health professions is proposed in new administration bills introduced early in April in the Congress. The bills provide for grants to the schools and loans to students in the fields of medicine, dentistry, dental hygiene, nursing, public health and sanitary engineering. A sliding scale for determining the amount of the federal grants is proposed. The largest aid will go to medical schools. Dental schools will receive the next largest share. The proposed formula provides that each medical school will receive $300 annually for each student in the school up to the average past enrollment plus $1,700 a year for each student in excess of the average past enrollment. For dental schools, the formula provides a grant of $250 per student up to the average past enrollment and $1,300 per student for those in excess of the previous average. The bills also provide for certain construction grants to expand physical facilities of the schools.

IN MEMORIAM

Frederick Joseph Conboy of Toronto, aged 68, died on March 29 in Wellesley Hospital.

He was graduated from the College of Dentisty of the Royal College of Dental Surgeons in 1904. He immediately began practice in Toronto where he had remained an outstanding citizen until the time of his death.

He is survived by his widow and one son —(See tribute in Ontario News Section.)

•

William Gillies of Saskatoon, Saskatchewan died in March following a lengthy illness.

He was born in Ontario and was graduated from the Chicago School of Dental Surgery. He came to Saskatoon in 1912 after practising in Chicago. In 1928 he took a graduate course at the Dewey School of Orthodontia and later specialized in this field. He retired three years ago. He was a mason for many years.

Dr. Gillies is survived by two daughters.

•

Richard Nash of Victoria, B.C., aged 82, died March 17. He was graduated from the University of Pennsylvania and practised in Victoria until his retirement about 10 years ago.

He appeared on numerous occasions as soloist with the Arion Club and for many years belonged to some of the smaller chamber music groups in the city. At one time he was a member of the Royal Victoria Yacht Club.

Dr. Nash is survived by his widow, one daughter and one son, Dr. Arthur Nash.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 MAI, 1949 No 5

Une maladie des gencives connue comme funeste: Le SCORBUT

par PAUL-E. POITRAS, D.D.S., Montréal

Que de gens ignorent cette maladie épidémique, enseignée dès l'âge scolaire, disparue aujourd'hui, mais dont les ravages ont nui énormément à la colonisation de la Nouvelle-France!

Jacques Cartier parle de la "Grosse Maladie" sans savoir qu'il parlait du scorbut.

A l'exception de quelques spécialistes, personne en connaît les syndromes, parce que l'hygiène alimentaire l'a rayée de notre pathologie.

Au XVIe siècle, les frégates, les flûtes, les galères étaient des mois en mer dans des conditions de confort qu'on ne peut pas imaginer; pas d'eau potable; comme nourriture: des haricots, du riz, du lard salé, et de la morue sèche; après quelques semaines de ce régime, le scorbut commençait sa triste moisson et les barbiers-chirurgiens à bord de ces bateaux, étaient amenés, bon gré mal gré, à soigner les bouches des passagers, des matelots, à leur extraire bon nombre de dents, sans s'occuper de la cause de la maladie.

A la suite de ces épidémies de scorbut, qui firent des victimes en la Baie d'Hudson, en Nouvelle-France, en Acadie, les habitants du régime français étaient trop occupés à défricher, à guerroyer, pour avoir le temps de soigner leur denture: les aliments simples et sains les protégeaient de la carie dentaire; sans compter que les médecins étaient rares et que les dentistes n'existaient pas; si, par malheur, un colon était forcé par le mal de dent d'aller chez le chirurgien ou le charlatan, il était assuré que, seule, l'avulsion entraînerait la disparition de sa douleur.

Cette maladie, qui naît chez les individus privés de viandes et de végétaux frais, obligés pendant un temps prolongé de se nourrir de viandes conservées, salées ou fumées, débute par un affaiblissement moral et physique avec des douleurs aux jambes, aux articulations, à la base de la poitrine, même à l'état de repos. Les gencives gonflées et ramollies s'ulcèrent et saignent, l'haleine est fétide, les dents se déchaussent, l'intérieur de la bouche se couvre de tâches bleuâtres et de bulles remplies de sang mélangé de sérosité. Les mouvements masticatoires deviennent difficiles par suite de l'enflure des ganglions lymphatiques (adénite); il se produit une nécrose des maxillaires.

Le véritable scorbut, qui est le stage final de la carence de la vitamine C, est maintenant rare. Il existe cependant une forme latente de ce mal à peine soupçonné chez ceux-là, qui se trouvent constamment en sous-nutrition. Chez les nourrissons il y en a une forme assez fréquente, appelée "maladie de Barlow", affection qui se complique de rachitisme.

Avant que cette maladie eût fait des ravages au Canada, les pays du nord de l'Europe en avaient connu les consé-

quences fatales. La chronique du siège de Damiette, pendant l'hiver 1218-1219, rapporte que les croisés furent victimes d'une maladie, que Jacques de Vitry décrit comme étant le scorbut. En 1248, l'armée de Saint Louis souffrit du même mal, que Joinville a, lui aussi, décrit soigneusement: "Nous ne mangions nulz poissons en l'ost (camp) tout le quaresme, mès (hormis) que bourbetes; et les bourbetes mangeoient les gens mors, pour ce que sont glous (goulus) poissons; et pour ce mischief et pour l'enfermeté du pays là où il ne pleut nulle fois goutte d'yaue, nous vint la maladie de l'ost qui estoit tel che la char de nos jambes séchoit toute, et le cuir de nos jambes devenoit tavelé de noir et de terre, aussi comme une vielz heuze (botte); et à nous qui avions tele maladie venoit char pourrie ès gencive ne nulz eschapoit de cette maladie que mourir ne l'en convenist. Le signe de la mort estoit tel que là où le nez seignoit il convenoit mourir." *(Léo Pariseau p. 7)*

Le barbier scarifiait les gencives bleuâtres et spongieuses sans rien y comprendre, et les moines et les mires perdaient leur latin à vouloir guérir ce mal.

Maintenant la guérison du scorbut est rapide, si le patient est sustenté d'aliments frais contenant les vitamines nécessaires à l'équilibre de son organisme.

A son deuxième voyage au Canada (1535-1536), Jacques Cartier hiverna au pays. Il choisit un endroit propice à élever un camp retranché en vue de se protéger contre les sauvages. Ce camp fut construit à l'endroit où la petite rivière Lairet se jette dans la rivière Saint-Charles. L'hiver fut terrible. Les marins, à cause de l'inexpérience du climat, du manque de nourriture fraîche, du logement mal aéré, souffrirent d'un mal étrange pour eux, qui décima une partie de l'équipage. Sur cent, dix hommes, vingt-cinq moururent, presque le quart, sans que les autres fussent épargnés de cette calamité.

En face de son impuissance, le découvreur malouin demanda l'aide de la Vierge Marie, toujours vénérée des Bretons. Lui qui est d'un pays où les calvaires, les madones, les pardons, sont innombrables, de cette Bretagne où la foi est vive et profonde, il organise un pélérinage dans la forêt pour demander un miracle au ciel: "Nostre cappitaine voyant la pitié et la maladie ainsi esmue, fiet mettre le monde en prières et oraisons et fist porter ung ymage et remembrance de la Vierge Marie contre ung arbre, distant de notre fort d'un treict d'arc, le travers les neiges et glaces: et ordonna que, le dimanche ensuyvant, l'on diroyt audict lieu la messe; et que tous ceulx qui pourroyent chemyner, tant sains que malades, yroient à la procession, chantant les sept pseaulmes de David, avecque la Letanye, en priant ladicte Vierge qu'il lui pleust prier son cher enffant qu'il eust pitié de nous. Et la messe dicte et chantée davant la dicte ymage, se fist le cappitaine pellerin à Nostre Dame qui se faict déprier à Rocquemado, proumectant y aller, si Dieu luy donnoyt grâce de retourner en France. Celluy jour trespassa Philippes Rougemont, natif d'Amboise, de l'aige de envyron vingt ans." *(The voyages of Jacques Cartier—H. P. Biggar, Léo Pariseau p. 12)*

Cartier se promenant sur la glace aperçut des sauvages de Stadaconé, dont Don Agaya, qu'il avait vu une quinzaine de jours auparavant souffrant de la même maladie que ses gens. Persuadé de la guérison de celui-ci, il lui demanda le secret de son retour à la santé; le sauvage lui repondit: "Avecq le juz des feulhes d'un arbre et le marq, il s'estoit guéry, et que c'estoit le singullier remedde pour maladie." . . . Ilz (les sauvages) appellent ledict arbre en leur langaige, *ANEDDA*."

L'infusion provenant de cette prescription rendit la santé si rapidement à ceux qui absorbèrent ce médicament que les convalescents crièrent au miracle.

"Après ce avoyr, y a eu telle presse, que on se voulloit tuer sus ladicte médecine, à qui le premier en auroyt; de sorte que ung arbre, aussi gros et aussi grand que je vidz jamais arbre, a esté employé en moings de huict jours, lequel a faict telle opération que si tous les médecins de Louvain et Montpellier

y eussent esté, avec toutes les drogues d'Alexandrie, ilz n'en eussent pas faict en ung an que ledict arbre a faict en huict jours; car il nous a tellement prouffité que tous ceulx qui en ont voulu user, ont recouvert la santé et garizon, la grâce à Dieu."

En résumé, Cartier ne connait pas le scorbut qu'il croit contagieux et il en fait une description soignée; s'il demande à Dieu et à la Vierge Marie un miracle il n'oublie pas de s'aider et fait boire à son équipage le remède spécifique des sauvages: l'Anedda.

Comme résultat, tous ne veulent pas croire à ce premier miracle canadien de la Vierge en faveur de Cartier et de ses hommes; ainsi l'historien protestant, Parkman, n'a pas manqué de constater la mort de Philippe Rougemont le jour où on se mit en prière devant l'image de la Vierge: "La Sainte Vierge ne daigna pas donner d'autre réponse." "The Holy Virgin deigned no other respond" écrit-il; mais le catholique, Joseph Pope, insiste sur les effets extraordinairement rapides que produisirent l'Anedda, dès que les français eurent connu son existence. Le docteur Léo Pariseau affirme que l'action d'un antiscorbutique chez ceux qui souffrent d'avitaminose est souvent très rapide. L'effet est prodigieux en regard de la gravité des symptômes. (*Léo Pariseau p.* 28)

L'affirmation du docteur Léo Pariseau est vraie, mais avant de l'accepter il faut se souvenir de certains faits qui plaident en faveur du miracle, le premier au Canada. Nous savons que Jacques Cartier ne connait pas de remèdes pouvant guérir la "grosse maladie"; il ignore la vitamine C, il a la foi vive des Bretons, il sait le pouvoir de Marie sur son fils Jésus, il espère que sa prière sera écoutée, il ne lui faut pas d'avantage pour crier sa croyance en la Mère de Dieu.

Aujourd'hui, la science médicale nous empêche de reconnaître comme miraculés les malades guéris de certaines maladies, entre autres du scorbut; mais n'oublions pas que la thérapeutique scorbutique du XVIe siècle était ignorée, que la connaissance de l'Anedda révélée aux français par les sauvages fut providentielle et comme le dit lui-même Cartier: "Dieu, par sa saincte grâce nous regarda en pityé et nous envoya congnoissance de nostre garison et santé" Il est convaincu, en voyant la guérison de ses hommes, de l'intercession de la Vierge Marie, ce qui ne l'empêche pas d'essayer de connaître la cause de cette maladie, si possible, en exigeant du barbier-chirurgien, Samson Ripault, de faire l'autopsie du cadavre de Philippe Rougemont, laquelle fut la première exécutée au Canada, et, après quatre siècles d'intervalle, est encore conforme à la description donnée par les experts de scorbut du XXième siècle. Jugez de la vérité de son dire:

"Il avait le coeur tout blanc et flétrit, environné de plus d'un pot d'eau rousse comme datte."

"Il avait le foie beau."

"Il avait le poumon tout noirci et mortifié . . . sortit au-dessus coeur une grande abondance de sang noir et infecte."

"Il avait la rate, par devers, l'échine un peu entamée, environ deux doigts, comme si elle eut été frottée sur une pierre rude. (En d'autres mots, la rate était friable, mais Cartier ne dit pas qu'elle était hypertrophiée.)"

"Lui fut ouverte et incisée une cuisse, laquelle étoit fort noire par dehors, mais en dedans la chair fut trouvée assez belle." *(p.27).*

Je prise beaucoup l'ordre de Jacques Cartier qui exige l'autopsie d'un cadavre, mort d'une maladie que tous semblent ignorer.

Soixante-et-huit ans après cet hivernage malheureux de Cartier, Henri IV, satisfait du récit de l'expédition de 1603, faite par Champlain, voulut favoriser la colonisation de tout son pouvoir, en donnant, malgré l'opposition du gouvernement de Normandie, à Pierre du Gua, sieur de Monts, huguenot de talent et d'expérience, le privilège de faire la traite depuis le cap de Roze en Terreneuve jusqu'au 50e degré de latitude nord.

De Havre-de-Grâce, en mars 1604, quatre navires, bien équipés, où nombre

d'hommes de métier, quelques soldats, plusieurs gentilshommes, s'étaient embarqués, faisaient voile vers le Nouveau-Monde. Deux de ces navires trafiqueraient à Tadoussac et les deux autres se dirigeraient vers l'Acadie, préférée au Canada, à cause d'un climat plus doux, pour y trouver un bon endroit de colonisation.

La baie de Fundy, appellée par de Monts la baie des Français, fut cotoyée; par suite de la saison avancée, on décida de passer l'hiver dans l'ile Sainte-Croix. Des soixante-et-dix-neuf personnes descendues à terre, trente-cinq moururent sans que le chirurgien eût pu les sauver. La science médicale, pas plus qu'autrefois, ne pouvait lutter contre le scorbut; Champlain, sans différer sensiblement de la narration de Cartier, écrivit tous les détails de ce mal qui exerça, plusieurs fois sous ses yeux, ses ravages.

"Durant l'hyver," dit-il, "il se mit une certaine maladie entre plusieurs de nos gens, appellée Mal de la Terre, autrement scorbut, à ce que j'ai ouï dire depuis à des hommes doctes. Il s'engendrait à la bouche de ceux qui l'avaient de gros morceaux de chair superflue et baveuse (qui causait une grande putréfaction) laquelle surmontait tellement, qu'ils ne pouvaient presque prendre aucune chose, sinon que bien liquide. Les dents ne leur tenaient presque point, et les pouvait-on arracher avec les doigts sans leur faire douleur. L'on leur coupait la superfluité de cette chair qui leur faisait jeter force sang par la bouche. Après il leur prenait une grande douleur de bras et de jambes, lesquelles leur demeurèrent grosses et fort dures, toutes tachetées comme des morsures de puces, et ne pouvaient marcher à cause de la contraction des nerfs: de sorte qu'ils demeuraient presque sans force, et sentaient des douleurs intolérables. Ils avaient aussi douleurs de reins, d'estomac, et de ventre, une toux fort mauvaise et courte haleine; bref, ils étaient en tel état, que la plupart des malades ne pouvaient se lever ni remuer et même ne les pouvait-on tenir debout, qu'ils ne tombassent en syncope: de façon que de 79 que nous étions, il en mourut 35 et plus de 20 qui en furent bien près: la plupart de ceux qui restèrent sains, se plaignaient de quelques petites douleurs et courte haleine. Nous ne pûmes trouver aucun remède pour la curation de ces maladies." *(Les voyages de Champlain, édition 1613, livre 1, ch. VI)*

L'hiver 1605-1606, que voulurent passer les Français à Port-Royal, fut, comme les autres, désastreux. Champlain écrit: "De 45 que nous étions il en mourut 12 . . . et cinq guérirent le printemps venant." *(Livre 1, ch. XI)*

Le scorbut, dès le premier hivernage qui suivit la fondation de Québec, fit de nouvelles victimes. Dix-huit habitants furent frappés et dix en moururent.

Pendant le XVIe siècle, la France eut à lutter dans son effort de colonisation contre le rôle sinistre joué par le scorbut durant un drame qui se déroula dès la découverte de Jacques Cartier et se continua jusqu'au delà de la fondation de Québec, ce qui aida beaucoup les premiers écrivains à raconter le mal causé par cette terrible maladie.

Champlain croit avoir trouvé les causes de cette maladie et donne son opinion:

"Or je tiens," dit-il, "que ces maladies ne proviennent que de manger trop de salure, et légumes qui échaffent le sang, et gâtent les parties intérieures. L'hiver aussi en est en partie cause qui resserre la chaleur naturelle qui cause plus grande corruption du sang; et aussi la terre quand elle est ouverte il en sort de certaines vapeurs qui en sont encloses lesquelles infectent l'air: ce que l'on a vu par expérience en ceux qui ont été aux autres habitations après les premières années que le soleil eût donné sur ce qui était déserté, tant de notre logement qu'autres lieux où l'air y était beaucoup meilleur et les maladies si après comme devant . . .

. . . Depuis le mois d'avril jusqu'au 15 de décembre l'air y est sain et bon, qu'on se sent en soi aucune mauvaise disposition.

Mais janvier, février et mars sont dangereux pour les maladies qui prennent plutôt en ce temps qu'en été, pour les raisons ci-dessus dites; car pour le traite-

ment, tous ceux qui étaient avec moi étaient bien vêtus, et couchés en de bons lits, et bien chauffés et nourris, s'entend des viandes salées que nous avions, qui à mon opinion les offensaient beaucoup; et à ce que j'ai vu, la maladie s'attaque aussi bien à un qui se tient délicatement, et a bien soin de soi comme à celui qui sera le plus misérable. Nous croyions au commencement qu'il n'y eût que les gens de travail qui fussent pris de ces maladies; mais nous avons vu le contraire. Ceux qui navigent aux Indes Occidentales et plusieurs autres régions, comme vers l'Allemagne et l'Angleterre, en sont aussi frappés qu'en Nouvelle-France. Depuis quelque temps les flamands en étaient attaqués en leurs voyages des Indes, ont trouvé un remède fort singulier contre cette maladie, qui pourrait bien servir; mais nous n'en avons point la connaissance pour ne l'avoir recherché. Toutefois je tiens pour assurer qu'ayant de bon pain et viandes fraîches qu'on n'y serait point sujet." *(Voyage de Champlain, édition* 1613, *livre* 2, *Ch. VI)*

Il est impossible d'accepter les trois causes de cette maladie expliquées par Champlain: les aliments salés, le froid, les émanations terrestres; les aliments salés, étant donné le manque de vitamines, en sont la cause; le froid ne peut être qu'indirectement inculpé et les vapeurs terrestres qui pourraient infecter l'air et corrompre le sang, ne sortent pas d'un sol gelé jusqu'à une profondeur d'au moins un pied et recouvert de plusieurs pieds de neige.

Le père Biard dans les Relations des Jésuites de 1611, page 4, après avoir cité l'opinion de Champlain ajoute:

"Son dire n'est pas impertinent, ni sans exemple: néanmoins on peut opposer que les mariniers qui vont qu'à la côte pour pêcher, et ne défrichent aucunes terres, ni ne les habitent, nonobstant souvent tombent en ce mal, surtout les Bretons car il me semble que ce mal les va tirant entre tous les autres."

"J'en ouï d'autres qui philosophaient autrement et non sans physique. Ceux-ci opinaient que de demeurer accroupi pendant un long et sombre hiver, tel qu'est celui du Canada, avait causé ce mal aux nouveaux habitants; que, de tous ces gens du sieur de Monts, qui premièrement hivernèrent à Sainte-Croix, onze seulement demeurèrent en santé; c'étaient les chasseurs, qui en gaillards compagnons, aimaient mieux la picorée *(1)* que l'air du foyer, courir un étang que de se renverser paresseusement dans un lit, de pétrir les neiges en abattant le gibier que de ne pas se déviser de Paris et de ses rôtisseurs auprès du feu."

Benjamin Sulte appuie sur le fait que le scorbut n'était pas la faute du pays mais le résultat des mauvaises conditions hygiéniques, des privations prolongées, du manque de légumes frais et de l'abus des viandes salées, en résumé une mauvaise alimentation.

"Les hommes," dit encore Benjamin Sulte, "nourris uniquement de viandes pendant un temps assez long s'exposent aux affections de ce genre, qu'il mangent du lard, du boeuf ou du chevreuil; mais si la viande est salée, surtout si c'est du lard, comme dans le cas de nos Français, l'effet est plus rapide et terrible dans ses résultats. Le remède consiste à manger des légumes ordinaires ou toutes sortes de plantes se rapprochant des légumes. Ainsi les sauvages enseignèrent à Cartier de faire bouillir l'écorce d'un certain arbre et de boire cette décoction, ce qui sauvera la vie du reste des marins non encore épuisé par le fléau. Je suis persuadé que ce "Pain Killer", appellé par les sauvages AMEDDA ou ANEDDA, était de la bière d'épinette, car elle est excellente contre le scorbut. Dans les coupes de bois ou chantiers du Saguenay, du Saint-Maurice et de l'Ottawa, où régnait autrefois cette maladie on l'a fait disparaître en mêlant des légumes à l'ordinaire des hommes."

Personne n'a jamais nié la vertu de la bière d'épinette, riche en vitamine C, comme remède préventif du scorbut mais il y en a d'autres excellents qui ont la même qualité à des degrés divers.

Les commentateurs des relations de voyages de Jacques Cartier ont voulu reconnaître dans l'Anedda, l'épinette

(1) La Picorée: action de marauder

blanche, le pin blanc, la pruche, etc. sans jamais être affirmatifs; cependant une réalité existe, comme l'Anedda ne perd pas ses feuilles en hiver, il faut conclure à un conifère: c'est la seule vérité, toutes les autres opinions ne sont qu'hypothèses.

Le manuscrit du troisième voyage (1541) de Cartier en langue française est perdu et la traduction anglaise de Hayluyt, publiée en 1600, à Londres est malheureusement incomplète, celui-ci termine en écrivant ". . . the rest is wanting." Si un jour le texte français était retrouvé nous serions, peut-être, embarrassés d'avoir à choisir l'espèce de conifère dont l'auteur voulait parler.

Par exemple, le frère Marie Victorin pourrait-il encore envisager l'hypothèse du pin blanc ou de l'épinette blanche? Le docteur Léo Pariseau serait-il convaincu que l'Anedda ne peut être que l'épinette blanche? Biggar, parlant de l'arbre de Cartier, voudrait-il encore avoir écrit: "Seems to have been hamlock", dont la traduction est la pruche (tsuga).

Le frère Marie Victorin a une remarque fort judicieuse lorsqu'il dit que Jacques Cartier ne connait pas la botanique puisqu'il mélange les conifères trouvés au Canada; par exemple: il donne le nom d'if à la pruche et se sert du nom de pruche pour désigner l'épinette blanche.

Cependant il me faut parler de l'hypothèse de Jacques Rousseau qui me semble la plus vraisemblable. Le moine André Thévet, dont le témoignage de ouï-dire est parfois sujet à caution, mais dont les relations d'amitiés avec Jacques Cartier et le chef sauvage Donnacona, vivant en France, lui permirent d'apprendre d'eux ses récits sur le Canada, parle, dans un de ses textes, du jus des feuilles squamiformes d'un arbre souverain contre les maladies. Cet arbre, connu sous le nom de cèdre canadien, le thuya des botanistes, pourrait-il être l'arbre du scorbut, que Jacques Cartier a rendu célèbre sous le nom d'Anedda?

Le cèdre canadien est le premier conifère d'Amérique introduit en Europe; il fut planté dans les jardins de Fontainebleau, sous François Ier, souverain de Cartier, où on lui donna le nom d'"arbre de vie", nom conservé encore aujourd'hui par les anglais, "Arbor vitae". Ce serait une explication de son introduction hâtive en France et on comprendrait mieux ce nom d'"arbre de vie" à la condition de l'accepter (le thuya) comme étant l'Anedda de Cartier.

Terminons en rappelant que tous les conifères contiennent la vitamine C et que plusieurs espèces furent employées par les sauvages contre le scorbut.

BIBLIOGRAPHIE

BIARD, s.j.—Relations des Jésuites—1611.

BIGGAR, H.P.—The voyages of Jacques Cartier—Ottawa 1924.

CHAMPLAIN, S.—Les voyages—édition 1613. 1613.

DIONNE, N.E.—Samuel Champlain—1891.

GAUTHIER, ROGER—Thuya—Le Devoir, 22 novembre 1947.

MARIE-VICTORIN—f.e.c.—Les abiétacées du Québec—1926.

PARISEAU, LEO—En marge du récit de la "grosse maladie" du capitaine Cartier,—1934.

ROUSSEAU, JACQUES—La botanique canadienne à l'époque de Jacques Cartier—1937.

SAINTE-FOY—ROC-Amadour—La Presse — 1946.

THEVET, ANDRE—Les singularitez de la France antarctique (1557-58), Ed. Gaffarel—1878.

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Les dentistes de demain

A cette période de l'année, où les finissants de collèges classiques s'orientent vers de carrières de leur choix, il arrive souvent que des dentistes sont consultés sur les qualités requises pour l'étude de la chirurgie dentaire.

Certains collèges font ce dépistage pour leurs élèves et leur présentent les qualifications "sine qua non", intellectuelles et physiques, exigées pour la réussite dans les principales branches de l'activité humaine.

Des orienteurs poussent plus loin cette direction en mettant en parallèle les qualités, les goûts et la tendance d'esprit de sujets particuliers avec les aptitudes spécifiques, obligatoires, pour chaque sphère d'action.

L'Association Dentaire Américaine mène actuellement une enquête sur les qualités indispensables aux candidats à l'étude de la chirurgie dentaire. Cette compilation doit durer cinq ans et renferme une série d'épreuves et de tests, que doivent subir les aspirants-dentistes. Cette élimination est devenue nécessaire par le nombre exorbitant de jeunes gens voulant s'inscrire aux facultés dentaires et par l'exiguité de ces écoles. Cette étude devrait jeter un peu de lumière sur les exigences morales et physiques des praticiens en chirurgie dentaire.

Un plan similaire d'orientation professionnelle est adopté par le comité des inscriptions à la faculté de Chirurgie Dentaire de l'Université de Montréal, qui reçoit plus d'applications qu'il n'y a de places disponibles.

A plusieurs reprises, nous avons été consultés par des institutions et des parents soucieux de l'avenir de leurs enfants. Nous reproduisons plus bas des réponses à un questionnaire-type, qui nous a été envoyé par une maison d'enseignement importante de la Province. Les opinions, que nous exprimons, dans cette enquête sont personnelles et sujettes à discussion par les

membres de la profession; elles ne couvrent pas tous les aspects de l'existence d'un dentiste; elles sont présentées dans le seul but de fixer certaines données sur les dispositions demandées pour le succès de l'exercice dentaire.

1—*Quelle est brièvement, la tournure d'esprit demandée?*

a) Système nerveux solide. Le fait de traiter des patients nerveux, toute une journée, occasionne une tension nerveuse considérable.

b) Psychologie exercée, pour comprendre la tournure d'esprit de chaque patient.

c) Minutie, dans travail et pour la perception des honoraires (petites sommes).

d) Esprit de coordination et de synthèse. Le traitement des patients comporte une série d'opérations minutieuses et variées, qui doivent être ordonnées et classées dans un plan d'ensemble.

e) Habileté manuelle, dextérité, etc.

f) Esprit curieux et chercheur pour se tenir au courant des changements continuels de techniques, etc.

2—*Somme de travail demandée? (Etudiant)*

a) Programme d'une journée:
Cours théoriques: 40%
Laboratoire ou clinique: 60%
Cours théoriques: 3 heures
Cours pratiques: 4 heures

b) Des lectures sont conseillées et indiquées, mais aucun rapport sur ces lectures n'est exigé.

c) Il n'y a pas de thèse obligatoire, actuellement, mais des projets se précisent dans ce sens. Les élèves, toutefois, sont invités par des organisations "extra-murales" à écrire des travaux pour des concours, etc.

3—*Moyenne de ceux, qui finissent, en proportion de ceux, qui commencent?*
10% des élèves ne se rendent pas à terme.

4—*Où exactement, le cours mène-t-il? Fonction, traitement moyen, âge du mariage.*
Le cours mène à une aisance moyenne. Le chirurgien-dentiste conduit son affaire seul; il est son propre maître, n'a de compte à rendre à personne (si ce n'est à sa clientèle et au gouvernement). Il est aussi le seul à produire (vacances, maladies sont onéreuses).
Traitement moyen: $5,000.00 à $10,000.00, par année. Ce montant varie avec le genre de clientèle, le nombre d'heures consacrées au travail, l'exercice d'une spécialité, etc.
Mariage: vers trente ans.

5—*Déboursés onéreux? Possibilité de bourses?*
Frais de scolarité annuels: environ $500.00
Installation d'un cabinet: environ $5,000.00

Des bourses sont octroyées par la Fondation Kellogg à quelques étudiants peu fortunés.

6—*La question de santé?*

Une santé excellente est de toute nécessité. Travail sédentaire, confiné à l'intérieur (pas de visites à l'extérieur, comme un médecin).

Travail exécuté, la plupart du temps, debout, dans une position penchée. Bonne vue. Système nerveux à toute épreuve.

Extérieur propre et agréable (obèses, qui transpirent, personnes souffrant d'ecxéma, d'acné, etc. ne sont pas à leur place).

7—*Temps pour s'adonner aux sports?*

Impossible de s'adonner aux sports, durant la semaine.

8—*Temps libre pour vie sociale?*

Soirées, occasionnellement.

Ces considérations illustrent les changements, qui se sont produits depuis un quart de siècle dans la conception sur les dispositions requises par un bon praticien. Autrefois, le dentiste, qui pouvait confectionner la couronne la plus luisante, était un as; aujourd'hui, la science dentaire donne au praticien une formation beaucoup plus étendue; les sciences de base (anatomie, physiologie, biologie, chimie, anatomie pathologique, histologie, etc.) jouent un rôle beaucoup plus grand dans la formation de l'étudiant et l'orientent vers un champ d'action plus vaste et compréhensif.

Le dentiste moderne regarde la cavité buccale comme faisant partie d'un tout, comme un organe en relation avec le reste du corps humain et non pas comme une région encloisonnée, indépendante des autres régions de l'économie.

GERARD DE MONTIGNY.

Dentisterie sans douleur

Quelques dentistes se spécialisent en orthodontie, d'autres en chirurgie buccale. Le docteur Raymond Herndon, de Washington, se spécialise dans le traitement de patients "impraticables". Plus de la moitié des patients, qu'il traite, sont remerciés par ses confrères: alcooliques, enfants incontrôlables, adultes atteints de psychoses ou de neuroses, qui les rendent totalement incapables d'endurer le bruit et la vibration de la fraise.

Dans une conférence présentée à la District of Columbia Dental Society, récemment, le docteur Herndon décrivait sa méthode pour venir à bout de ces malades: il se sert d'anesthésie générale. A son cabinet, ce dentiste a, à son service, un anesthésiste et deux assistants, qui lui prêtent main forte, au besoin, et des fauteuils dentaires, qui peuvent, à l'occasion, se transformer en tables d'opération.

Le gros avantage de cette méthode, selon l'auteur, est l'économie de temps. Pour une institutrice, le docteur termina 42 cavités en trois heures; une femme d'affaires, de Washington, pressée, put faire obturer 10 dents et en faire extraire 5, en une heure. "Le temps n'est pas si éloigné, disait ce confrère, où toute la dentisterie se pratiquera sur des patients endormis."

Dans le Monde Dentaire

A la Société de Stomatologie de Québec.

La séance de mars offrait aux membres de la Société de Stomatologie de Québec une conférence sur les dentiers immédiats par le docteur A. Couture, d'Ottawa. Cette présentation était illustrée d'un film en couleurs montrant les différentes phases d'une technique de l'auteur pour la confection de prothèses immédiates.

De plus, au cours de cette réunion, les docteurs Remy Langlois et Jules Hamel présentèrent un travail sur les fractures des maxillaires.

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A la Société Dentaire des Trois-Rivières.

A la réunion du 24 mars de cette Société, le conférencier invité était le docteur Antoine Raymond, de Montréal, qui avait choisi comme sujet: "Prémédication et complications post-opératoires en chirurgie buccale".

Le docteur Conrad Godin, aviseur de la Société et le docteur Réal Lamothe, vice-président, présentèrent et remercièrent respectivement le clinicien.

Le docteur Louis Lépine, président de la Société Dentaire de Montréal, fit part aux membres et donna des détails sur le Congrès de Montréal, organisé à l'occasion du vingt-cinquième anniversaire de la fondation de la Société Dentaire de Montréal.

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Réunion du Comité Exécutif, à Toronto, du 28 février au 1er mars

Le Comité Exécutif de l'A.D.C. s'est réuni à Toronto, les 28 février et 1er mars. Le Comité Consultatif a fait rapport d'une étude d'arrangements possibles pour doter l'Association de quartiers-généraux plus spacieux. Il y eut unanimité à constater l'exiguité des locaux de l'Association pour mener à bien les activités essentielles. Le seul obstacle à un agrandissement est pécuniaire. Le Comité Consultatif a été encouragé à persévérer dans ses efforts et à présenter un budget à cet effet à la réunion de juin, lequel budget devrait renfermer le coût approximatif de ces nouveaux quartiers-généraux, de son entretien et du personnel nécessaire.

Des questions importantes furent étudiées, dont voici un résumé:

1) *Liste des membres:* Une liste des membres de l'A.D.C. sera publiée au début de 1950 et cette liste, en plus des noms et adresses, renfermera la date et l'Université, où les études furent faites.

2) *Le Journal de l'A.D.C.:* L'augmentation du coût d'impression du Journal est effarante. Chaque livraison représente une perte considérable à l'Association.

3) *Congrès annuel:* Un rapport complet du programme du Congrès annuel est étudié et les organisateurs sont félicités pour leurs efforts inlassables. Tout est prévu pour faire un succès de la réunion de Saskatoon, en juin, du 5 au 8.

4) *Fédération Dentaire Internationale:* Après avoir analysé la volumineuse correspondance échangée à ce sujet, le Comité est d'avis que le plan suggéré à la dernière réunion du Bureau des Gouverneurs, c.-à-d. que l'inscription comme membre à la F.D.I. soit laissée libre, est impraticable. De plus, la participation aux activités de la F.D.I., en tant que Comité National, est possible seulement à la suite d'un octroi voté par une association nationale.

5) *Requête en rapport du Contrôle des loyers:* Une requête signée de 200 membres est étudiée. Cette requête demande à l'Association d'intercéder en faveur des signataires pour demander le maintien des contrôles pour ceux, qui ont leurs cabinet et leur demeure dans le même local. Une revue de la politique de l'Association sur ce sujet est faite. Il est signalé que l'Association, dans le passé, s'était opposé à tout contrôle les honoraires professionnels et de toute autre activité se rapportant aux membres de la profession. On fut d'avis que la soumission d'une telle requête constituerait un volte-face de la politique générale et, en conséquence, aucune motion ne fut presentée.

6) *Publicité:* La question de la publicité de l'Association, envers le public et ses membres, fut discutée longuement. Quoique présentement cette publicité laisse à désirer, on est d'avis qu'elle ne peut guère être améliorée

jusqu'à ce que l'Association ait à sa disposition des facilités plus grandes.

Le budget pour l'année courante fut établi; les derniers arrangements pour la réunion du Bureau des Gouverneurs, à Saskatoon, furent élaborés et d'autres questions de moindre importance furent réglées.

Comité consultatif sur la Santé constitué.

A la demande du Ministre fédéral de la Santé, on vient de constituer un Comité Consultatif sur le Programme de Santé du Canada. Ce Comité jouera un rôle consultatif auprès du Ministère. Le Président Merkeley a nommé les membres suivants: MM. les docteurs Harvey W. Reid, président, Gustave Ratté, G. V. Fisk, Aberdeen McCabe, Don W. Gullett.

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Tournée du Président dans l'Est.

Le Président de l'A.D.C., accompagné du Secrétaire, a prononcé quelques causeries à des réunions de groupements dentaires tenues dans l'Est du Canada, durant les deux dernières semaines du mois d'avril. Ces communications avaient comme titres: "Les buts de l'Association Dentaire Canadienne" (Dr Merkeley) et "Le plan d'étatisation de la dentisterie, en Angleterre" (Dr Gullett).

Ces réunions ont été tenues aux endroits suivants:

Saint-Jean, N.-B. sous les auspices de la New Brunswick Dental Association, mardi, le 19 avril.

Halifax, N.-E., sous les auspices de la Nova Scotia Dental Association, mercredi, le 21 avril.

Charlottetown, I. du P.-E., sous les auspices de la Prince Edward Island Dental Association, jeudi, le 21 avril.

Québec, P.Qué., sous les auspices de la Société de Stomatologie de Québec, lundi, le 25 avril.

Trois-Rivières, P.Qué., sous les auspices de la Société Dentaire des Trois-Rivières, mardi, le 26 avril.

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Nécrologie.

Le docteur Georges Pelletier. Né le 29 janvier 1887, à Lavaltrie, le docteur Pelletier apprit à lire à l'école de sa paroisse pour continuer ses études à l'école normale Jacques-Cartier, à Montréal. Il était dentiste depuis plusieurs années, quand ses condisciples le nommèrent président des anciens élèves de cette institution. Pendant huit ans, il enseigna dans les écoles de la Commission scolaire catholique de Montréal. Avec l'espoir d'avoir une vie plus indépendante, il se présenta aux examens du brevet et, entra, en 1916, à l'école de chirurgie dentaire de l'université Laval, dont il réussit d'abord le baccalauréat, pour recevoir ensuite le doctorat, en 1920.

Elu par ses confrères gouverneur du Collège des chirurgiens-dentistes de la province de Québec, il en devint président en 1940.

Pendant vingt-cinq ans, il exerça sa profession à Montréal. La maladie qui devait l'emporter, le 28 février 1949, le força à se retirer à l'Assomption, au début de l'année 1946. En reconnaissance des services rendus aux dentistes, le Collège le nomma membre honoraire, le 30 août 1946.

Il était célibataire, membre du club Canadien et du conseil Lafontaine des Chevaliers de Colomb.

Le docteur J. Hilaire Fortin. A S.-Barthélemy, le 24 mars 1949, chez son gendre Hubert Globensky, est décédé le docteur J. Hilaire Fortin, L.D.S.

Le docteur J. H. Fortin, né à Beauceville, en 1876, avait fait ses études à Sherbrooke, au séminaire S.-Charles-Borommé et à l'école normale de Québec. Elève de la première école dentaire du Québec, il fut licencié de l'Association des chirurgiens-dentistes de la province de Québec, en 1894. Il eut son doctorat à Denver, Colorado. Vers 1893, grâce à son frère Mtre Thomas Fortin, devenu par la suite juge de la Cour Supérieure, il obtint de la Legislature de Québec la réduction de quatre à trois ans la durée des études de la chirurgie dentaire. En 1902, l'ancienne loi de quatre ans fut rétablie.

Ancien gouverneur de l'Association, il fut professeur français de matière médicale, de thérapeutique et de chirurgie buccale, jusqu'en 1899, où il démissionna.

Il laisse son épouse, née Céline Julien, ses fils, le docteur Henri-Louis Fortin, MM. Hector et Roger Fortin, ses filles Mmes Hubert Globensky (Anna-Marie) et J. Emile Lacoursière (Atala).

Paul-E. Poitras

Réunion du Bureau des Gouverneurs de l'A.D.C., à Saskatoon

Voici le programme de la réunion du Bureau des Gouverneurs de l'Association Dentaire Canadienne, qui aura lieu à Saskatoon, Saskatchewan, du 2 au 6 juin 1949, conjointement avec le Congrès annuel de l'A.D.C.:

le jeudi, 2 juin—p.m.	1.30- 5.30 hrs	—	1ière séance du Bureau des Gouverneurs
	8.00-11.00 "	—	Comités des rapports
le vendredi, 3 juin—a.m.	9.00-12.00 "	—	Comités des rapports
p.m.	1.30- 5.30 "	—	2ième séance du Bureau des Gouverneurs
	8.00-11.00 "	—	Comités des rapports
le samedi, 4 juin—a.m.	9.00-12.00 "	—	3ième séance du Bureau des Gouverneurs
p.m.	1.30- 5.30 "	—	4ième séance du Bureau des Gouverneurs
	8.00-11.00 "	—	Comités des rapports
le lundi, 6 juin—p.m.	1.30- 5.30 "	—	5ième séance du Bureau des Gouverneurs
(si nécessaire, une 6ième séance aura lieu)			
le mercredi, 8 juin	12.00- 2.00 "	—	Diner et réunion annuelle de l'A.D.C.
			Discours du président
			Entrée en fonction des officiers
			Séance ouverte.

Congrès de la Société Dentaire de Montréal

25ième Anniversaire

PROGRAMME

JEUDI, 2 JUIN 1949

A.M.	9.00 hrs	Inscription
	10.00-10.30 "	Ouverture du congrès
	10.30-11.30 "	Clinique: "Méthode indirecte-directe de prise d'empreinte pour incrustation avec les substances colloidales", Drs E. Lussier et J. Demers.
	12.00- 2.00 "	Déjeuner—Un orateur
P.M.	2.30- 4.15 "	Cliniques simultanées (par groupes) Nos 1-2-3
	4.30- 5.30 "	Cliniques simultanées (par groupes) Nos 4-5-6
	7.00 "	BANQUET: 25ième Anniversaire

VENDREDI, 3 JUIN 1949

A.M.	9.30-11.30 "	Cliniques simultanées (par groupes) Nos 1-2-3
	11.30-12.00 "	Films
	12.00- 2.00 "	Déjeuner—Conférence humoristique, M. Gérard Delage.
P.M.	2.30- 4.15 "	Cliniques simultanées (par groupes) Nos 1-2-3
	4.30- 5.30 "	Cliniques simultanées (par groupes) Nos 4-5-6
	6.00 "	Buffet-coquetel-divertissements.

SAMEDI, 4 JUIN 1949

A.M.	9.30-11.00 "	Cliniques de tables
	11.00-12.00 "	Forum
	12.00 "	Clôture du congrès

CLINICIENS:

1.	Dr S. Copeland,	Toronto, Ont. "Inlays, ¾ Gold crowns, Cast crowns and Bridgework"
2.	Dr John H. Gunther, Dr M. Meloy, Fils,	Université de Pennsylvanie, Philadelphie, Penn. "Chirurgie buccale"
3.	(Nom du Clinicien à venir)	"Prothèse complète"
4.	Dr J. Arthur Renaud,	Université de Montréal, Montréal. "Les sulfamidés employés dans un nouveau traitement conservateur des pulpes blessées"
5.	Dr Charles A. Durand,	Montréal, Que. "Fluor vs. Carie Dentaire"
6.	Dr G. Hervé Deschênes,	Université de Montréal, Montréal, "Amalgame"

Photo by Kenneth M. Johnson, Winnipeg, Manitoba

ABOVE McARTHUR FALLS

Winnipeg River, Manitoba

Humanity is in danger of being trapped in this world by its moral adolescents. Our knowledge of science has clearly outstripped our capacity to control it.

We have too many men of science; too few men of God.

We have grasped the mystery of the atom and rejected the Sermon on the Mount.

Man is stumbling blindly through a spiritual darkness while toying with the precarious secrets of life and death. The world has achieved brilliance without wisdom, power without conscience.

Ours is a world of nuclear giants and ethical infants.

We know more about war than we know about peace, more about killing than we know about living.

This is our twentieth century's claim to distinction and to progress!—General Omar Bradley.

HUGH M. EATON, D.D.S.
Halifax, Nova Scotia

Graduate of Dalhousie Dental School 1927.
Past President of the Halifax Dental Society.
Past President of the Nova Scotia Dental Association.
Chairman, Joint Convention Committee, Canadian Dental Association Convention, 1947.
Clinical Demonstrator and Professor of Radiology, Dalhousie University.
Associate Examiner of the Dominion Dental Council.
Vice-Pres. The Provincial Dental Board of Nova Scotia.

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SOME DENTAL ASPECTS OF MAXILLO-FACIAL INJURIES*

by GEO. M. MacDONALD, M.B.E., D.D.S., M.S.D., (Major, R.C.D.C. Retired)
and
ALEX. T. ROGER, M.B.E., D.D.S., (Major R.C.D.C. Reserve)

The following is a review of the dental aspect of treatment as rendered to maxillo-facial injuries at the Canadian Army Base Hospital at Basingstoke, Hants, England, during World War II, and is arranged from records, reports, case histories and personal observations. This hospital was known as Basingstoke Neurological and Plastic Surgery Hospital (B.N. & P.S.H.).

The material in this review and the treatment methods discussed are mostly those which are considered of particular dental interest, or deal with associated surgical aspects which, directly or indirectly, influenced or modified the treatment, and therefore are included in order to provide a better appreciation of the problems encountered.

We are presenting the treatment of "battle casualty" injuries in greater detail than that of the "civilian" or "crush" type of jaw fractures because they offered a wider variety of problems than the average type of "crush" jaw fracture with which the dental surgeon is more familiar.

For a comprehensive report on the surgical aspect of these problems, the reader is referred to a recent article[1] by the group of plastic surgeons who were chiefly responsible for the plastic surgery at this hospital and with whom we worked in close collaboration. The excellent co-operation prevailing between the surgical and dental staffs was an important factor in expediting all phases of this treatment and undoubtedly was reflected to the advantage of the patient.

This hospital was equipped and staffed to provide treatment for neurological, cranial, facial, jaw, burn and associated injuries. The Plastic Surgery Division of the hospital was responsible for the treatment of all plastic surgery, jaw and burn cases. For the treatment of maxillo-facial injuries, the Dental Department was considered as part of the Plastic Surgery Division.

The nucleus of the Plastic Surgery Division was originally known as a Plastic Surgery Team, which was composed of plastic and dental surgeons and was stationed at a large British Maxillo-Facial Centre near Basingstoke. Some of us had the privilege of working with the British dental and plastic surgeons at this hospital and we developed a real admiration for the British approach to these problems. Their extensive experience with the early war and bombing casualties was of great value to us and we gladly borrowed of their knowledge and methods. This was particularly true of their work on cast-cap dental splints and external pin fixation.

We found the British publication,

*Sketches and photographic assistance by Department of Art & Photography Queen Mary Veterans' Hospital, Montreal, D.V.A.

"The Dental Treatment of Maxillo-Facial Injuries,"[2] an excellent treatise for study and reference and this book was used as a textbook during the course given to C.D.C. Officers at B.N. & P.S.H. at various times.

The organization of the dental service at B.N. & P.S.H. and the working out of the system of collaboration with the Medical Services was largely due to the efforts of Lt. Col. G. Franklin and Lt. Col. V. Jekyll, C.D.C. Valuable assistance was contributed by a number of other dental officers, notably Maj. R. E. McMahon, and Maj. H. D. Hall.

During and following the invasion period when the volume of work reached its climax there was a staff of three or more plastic surgeons and three dental surgeons. It was routine for a surgeon and a dental surgeon to operate together on all maxillo-facial injuries. For this purpose we followed a duty roster which covered the twenty-four hours of the day.

The dental service was generally responsible for the care of the mouth and the construction and placing of all splints, appliances and other fixation as required in the treatment of maxillo-facial injuries.

Types of Injuries

Maxillo-facial injuries were of two general types which were designated as

(a) Crush fractures (or civilian type).

(b) Battle casualties, known as G.S.Ws. (Gun Shot Wound).

The crush injuries consisted of fractures, bruises, lacerations, etc., resulting from traumatic contact with blunt objects of relatively low velocity such as fists, bottles, boots; also as a result of motor transport and air crashes.

There was a total of 695 maxillo-facial injuries of both types which required dental treatment. Of these we have copies of 514 case history records from which the data in Tables No. I and No. II have been taken.

Except for a few training accidents and one battle casualty from the Dieppe raid, the treatment of crush fractures constituted the bulk of the work prior to "D" day, June 6, 1944.

TABLE NO. I

	Mandible	Maxilla	Mandible and Maxilla	Total
Gun Shot Wounds...	196	36	40	272
Crush Fractures.....	169	49	24	242
	365	85	64	514

A few battle casualty wounded from Italy began to arrive late in 1943 for secondary or reconstructive treatment.

As was anticipated, the admission of battle casualties was particularly rapid and continuous after "D" day and for the first few months we were receiving Canadian, British, French, Polish and German wounded for "primary" as well as "secondary" treatment. It was customary to transfer other nationalities to their own hospitals as soon as they were sufficiently fit.

Battle casualty wounds were usually more destructive to both hard and soft tissues and presented greater variations and combinations of treatment problems than those of the crush type.

Their destructive action depended on the type and velocity of the missile. The small high velocity missile (rifle bullet) often produced a through and through perforation, leaving comparatively little damage. Nearly spent shell fragments or other missiles were often deflected or arrested from an otherwise fatal pathway by contact with, and resistance by, facial bones.

Both types of injuries (crush or G.S.Ws.) followed similar or parallel stages of treatment and recovery but with G.S.Ws. the early or field treatment, and the later reconstruction of hard and soft tissue loss, required attention of greatly increased magnitude.

Treatment of battle casualties began with the emergency first-aid measures which immediately followed the injury. This early treatment was the most important of all stages in the care of G.S.Ws. for the reason that the prompt application of effective emergency measures was the means of sav-

ing many lives. This was particularly true in regard to establishing a free and unobstructed airway and in the prevention of asphyxiation, from the aspiration of blood and debris, during evacuation. Pulmonary complications are perhaps the greatest hazard in M.F. wounds and transporting these patients on their back greatly increased the risk of respiratory difficulties and lessened the patient's chance for survival.

Field Treatment

The objective of Field Treatment was to save life and to speed evacuation. Ordinarily the wounded were passed as quickly as possible through the Regimental Aid Post, by the Field Ambulance to Casualty Clearing Stations where Field Surgical Units, or in the case of the maxillo-facial wounded, Maxillo-Facial Surgical Units were established. A very important role of the F.S.Us. was that of resuscitation for it was here that patients suffering from shock and haemorrhage received their plasma and blood transfusions as well as other necessary treatment.

In the early stages of the Normandy invasion, considerable emergency dental treatment for M.F. cases was rendered by the dental officers of the field ambulances who had landed with the assault troops on "D" day or shortly after[3]. These officers worked under great difficulties, often being required to treat severely wounded M.F. cases at night with no illumination but one or two flashlights. During approximately the first six weeks our M.F. wounded received only emergency treatment on the continent and then were evacuated as quickly as possible to base hospitals such as B.N. & P.S.H. in England for operative treatment. The emergency treatment consisted of attention to haemorrhage, airway, mouth debridement, wiring and other support for fractures and associated wounds.

Commencing about six weeks after "D" day, the early treatment required by Canadian M.F. wounded was rendered by two British Maxillo-Facial teams[4] which functioned in advanced areas on the Continent. These teams were composed of two surgeons and two dental surgeons. Their work was of great value in standardizing and expediting the treatment and care of these M.F. wounded.

The evacuation of the casualties from the continent was managed by two means of transportation. One was the normal sea-rail route via Southampton and hospital train. The other was by air ambulance from the continent to a near-by airfield. The more urgent cases were transported by air and occasionally we received patients within twenty-four hours of the time they were hit and frequently within forty-eight hours.

Base Hospital Treatment

The objective of all treatment was the physical rehabilitation of the patient. The dental objective was the restoration of the mouth and jaws to normal function.

The outstanding influence on the modification of recognized and established treatment for maxillo-facial injuries was the excellent control of infection by chemo-therapy.

Post-operative infection did not present an active problem. By infection we mean generalized infection with its concomitants of cellulitis, cervical adenitis, hyperpyrexia, mallaise, etc., which before the general use of chemotherapy had always been a major problem in the treatment of mouth wounds.

In a report on the surgical lessons of war, Major General W. H. Ogilvie states: "Penicillin has already written a new chapter in certain infections . . In the surgery of damaged and infected bone it has given what is perhaps the most striking proof of its value. Gunshot fractures have, under the protection conferred by penicillin, been closed by delayed primary suture with a high proportion of success. Gaps following compound fractures have been grafted as soon as, or even before, the wound was healed. Compound fractures have been fixed by plates, and reamputations have been performed while the provisional stump was still discharging. These procedures had been at-

tempted before; but the attempt had usually led to failure or even disaster. That they now succeed is an index of the debt we owe to penicillin."[5]

The presence of a superficial and free-draining infection such as occurs from around a partially exposed tooth root in or near a fracture, and involves only the alveolar portion of the mandibular body, was frequently noted to be present during all or part of the fixation period without producing any observable delay in the progress of clinical union.

The influence of chemo-therapy on infection was reflected in the usually normal and uncomplicated recovery of these M.F. wounds to the extent that sepsis, with abscess formation, rarely occurred and the few that did require draining were well localized and of minor virulence.

This freedom from infection also greatly increased the scope of reparative surgery as indicated by the large number of highly successful bone grafts and soft tissue restorations which were accomplished by the plastic surgeons.

Chemo-therapy should also be given the credit for a great share of our success in following what might be considered an ultra-conservative approach to the extraction of teeth in or adjacent to a fracture area.

This excellent control of infection by chemo-therapy, plus the early and adequate treatment by the M.F.S.Us. in advanced areas and the speedy evacuation of the wounded to base hospitals also modified the indications for the previously accepted practice of placing extensive drains through the floor of the mouth, as a prophylactic measure. Our observations were that where these ideal conditions existed, this procedure was not necessary.

The battle casualty wounded arrived at B.N. & P.S.H. on stretchers often in groups up to fifteen in number. They all had their field medical cards and other tags which described their wounds and previous treatments.

All patients were examined as soon as possible after admission and those with extensive injuries and doubtful diagnosis were taken directly to the X-Ray Department, where they were examined clinically and radiographically.

The duty officers representing the Neurosurgery, Plastic Surgery and Dental Services were frequently all present to examine the seriously injured and to consult with the radiologist. The Radiological Service at B.N. & P.S.H. in charge of Maj. Eaglesham provided amazingly high quality plates of excellent diagnostic value despite the many difficulties involved in the handling of seriously wounded patients.

The diagnosis was determined from an assessment of the injury and a plan of treatment was outlined. The responsible department took charge of the case and proceeded with the indicated treatment. It was not unusual for neuro, plastic and dental surgeons to operate on the same case in sequence on account of multiple injuries. In many serious combined cranial and facial injuries, the complete treatment of the jaw and face injuries was postponed until the neurosurgeons considered the cranial injury was under control. In some of these cases the M.F. treatment, except for emergency debridement and support, was delayed for one or two weeks.

It was at all times paramount that each case of compound injury whether crush, or G.S.W., be debrided, reduced and immobilized as soon as possible: therefore all cases of untreated compound M.F. injuries were operated within an hour or so after admission, day or night, except as noted above.

Examination, Diagnosis and Treatment Planning

The assessment of the injury or diagnosis was the sum total result of all relevant information derived from the history of the injury plus the clinical and radiological examinations. A brief history of the injury with a record of previous treatment was obtained from

the Field Medical Card which accompanied all battle casualties. Additional details were obtained from the patient when possible.

The clinical and radiological examinations were closely co-related in order to present all possible data necessary for an acceptable assessment of the injury. Generally, a careful and thorough clinical examination gave the best over-all appreciation of the injury. In addition to observation, a complete clinical examination included careful palpation of all bony borders and landmarks, gentle manipulation and thorough exploration of wounds. This part of the examination was frequently completed, under anaesthesia, preoperatively. The radiological examination covered details of fractures, loss and displacement of hard tissues, and was depended upon for confirmation, modification or amplification of the clinical findings. The diagnosis and localization of metallic foreign bodies and displaced hard tissue fragments, including teeth, by radiogaphic methods was invaluable in the treatment of G.S.W. injuries.

Some of the important points which were covered by the clinical examination are outlined below:

1. General Condition:

The patient's general condition was considered either good, fair or poor, and was determined in a general way by the degree of injury, previous treatment and stage of recovery.

2. Cerebral Involvement:

Any history or sign of cranial fracture or concussion was investigated by the neurosurgeons. The leakage of cerebro-spinal fluid from the nose or ears was occasionally noted.

3. Respiratory Embarrassment:

Occluded airway and pulmonary sequelae from the aspiration of blood, etc. were problems which frequently accompanied severe M.F. injuries.

4. Loss or Displacement:

Involvement of hard and soft tissues with their lacerations haemorrhage, haematomas, bruises, etc.

5. Mouth and Jaws:

Deformity, occlusion, teeth (present, missing, fractured, avulsed, loosened), swallowing, talking, etc.

6. Vision:

Maxillary fractures frequently resulted in diplopia on account of rectus muscle displacement. Unequal pupils, loss of light reflex, haemianopsia etc. were also noted.

7. Ears and Hearing:

These were affected by injuries involving the petrous portion of the temporal bone. The tympanic plate was frequently found to be displaced into the external auditory canal by trauma transmitted through the mandibular condyle head.

8. Neurological:

This covered an estimation of the motor and sensory loss involving cranial nerves serving the areas and muscles of the face, mouth, jaws and neck.

All relevant data derived from the history and examination was entered on the dental case history record together with diagrammatic sketches of the injuries. An outline of the proposed treatment was usually included.

For the purpose of treatment the M.F. cases could be divided into three general classes depending on the site and extent of the injury.

First, there were a large number of plastic surgery cases with injuries involving areas of the head, face and neck other than the mouth and jaws which required no dental treatment or attention beyond examination.

Secondly, there were many jaw and mouth injuries which were predominately of a dental character and were treated throughout by the dental surgeons. Cases which required mouth debridement, extractions, reduction and immobilization by wiring or dental splints were included in this class. Many simple cases of this type were handled in the dental clinic with morphia and local anaesthesia.

Thirdly, the great majority of injuries of the G.S.W. or crush type presented a combination of problems

which demanded the utmost in concentration and co-operation from both the plastic and dental surgeons.

Most crush type fractures were reduced and immobilized at the first operation. A few maxillary fractures required prolonged traction for complete reduction and certain types of fractures were considered non-reducible (e.g. some condyle fractures).

The immobilization of reduced fractures was maintained by the application of selected fixation as the case required. It was axiomatic that immobilization should approach the absolute and that the fixation appliances should combine comparative ease of application with effective and continuous control of the fragments. Early and accurate reduction with adequate fixation remained the prime requisites for satisfactory results.

The dental occlusion was a helpful guide to reduction but, where considerable displacement had occurred through muscular traction, the occlusion alone was not sufficient evidence of accurate reduction and approximation of the fragments.

The early reduction of displaced fragments was often difficult, on account of normal muscle tone and contracture which had to be overcome, but in late or subsequent reduction, as for bone graft restoration, muscular contracture was usually not a problem because of muscular atony and the resultant flaccidity.

The dental treatment was planned in relation to the surgical problems and, in our assessment of individual teeth and their role in the plan of treatment, we were mainly concerned with the utilization of some or all of the remaining teeth as valuable assets in planning and placing the required fixation. There were times when surgical requirements incidental to the restoration of facial continuity and maxillary function were considered to be of more immediate urgency than concern about future dental disability involving individual teeth.

In deciding on the method of immobilization our objective was to provide fixation which could be maintained for a period of time well beyond the estimated requirements, in order to provide a good margin of safety against any delay in union, of fracture or graft area.

In cases of uncomplicated crush fractures, where the fragments could be accurately reduced, it was considered satisfactory if clinical union was gained after a fixation period of five weeks. Many of these cases exhibited clinical union after four weeks or less but, to standardize treatment routine and to reduce unnecessary manipulations through testing procedures, it was decided to adopt a policy of maintaining fixation for a minimum of five weeks in all these cases, and the results obtained seem to indicate that this was a good policy for handling a large number of jaw fractures.

For the complicated multiple fracture cases, and for bone grafts, fixation was designed to function for a relatively longer period. Immobilization of large bone grafts was maintained for eight weeks or longer, in most cases.

Operative Procedure

Operating room procedure followed a pre-arranged plan which was discussed by plastic and dental surgeons who were operating on the case. The various steps were outlined and followed as closely as possible. The majority of cases were combined operations where the plastic and dental surgeons worked as a team, and each assisted the other during various stages of the operation as the work progressed from one field to another.

One of the important considerations was to strive for asepsis in the surgical approach to all un-contaminated extra-oral surgical fields about the face, jaws and neck. Wherever possible, the "clean surgery" was completed before the contaminated nasal and oral areas were approached. In cases which required only minor dental attention, such as a few extractions, this work was frequently done in the

anaesthetic room previous to the main operation.

Surgical operative procedures were generally known as primary or secondary. For crush injuries the primary operation consisted of debridement, closure of soft tissue lacerations, reduction and immobilization of fractures with wiring, splints or other methods. One operation of this nature, under general anaesthesia, was usually sufficient for crush injuries.

For G.S.W. injuries, the primary operation was similar but usually more extensive. Treatment was broadened because of the necessity for exploration of wounds and debridement of non-viable tissues — closure of soft tissue, with skin to mucous membrane in large defects — covering of exposed bone — tracheotomy — application of some fixation by wiring or splinting.

After the British Maxillo-facial Teams were established on the Continent, the majority of our M.F. wounded were given primary surgical treatment at these M.F.S.Us.

Most of the G.S.W. cases required several secondary or subsequent operations for repair of soft or hard tissues, or both. The sequence for these reconstructive operations was part of the treatment plan and the surgical stages were co-related with the requirements for treatment appliances and prosthetic restorations.

CASE NO. 621

From the original x-ray sketch

An unusual indirect fracture of the mandible caused by a high velocity missile (rifle bullet) passing horizontally through both cheeks at the plane of occlusion — fracturing two maxillary teeth — severely loosening one mandibular bicuspid—and producing bi-lateral fractures of the mental regions with numerous accessory fracture lines throughout the anterior portion of the mandible.

The two maxillary teeth and the partially avulsed mandibular left second bicuspid were extracted. Fixation was by cast-cap three sectional splint with precision locks across both mental fracture areas. Recovery was uneventful.

Debridement included the removal of all foreign material, detached bone fragments and non-retainable teeth from the fracture or wound area, plus the careful excising of non-viable soft tissue. The basic criterion for removal or retention of all fragments or tissues was the estimation of the blood supply. With G.S.Ws. many detached tooth and bone fragments were dispersed throughout the soft tissue as secondary missiles, and these were localized by radiological study and removed at operation.

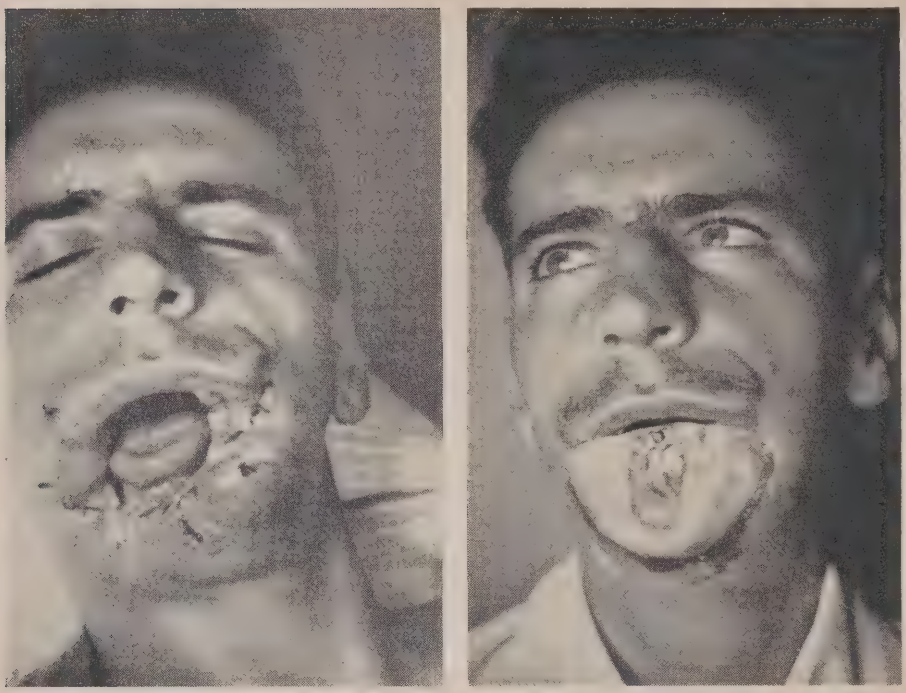
The problem of retention or removal of teeth from a fracture or wound area was approached conservatively. Decisions were based on the evaluation of each doubtful tooth after a study of the injury and an estimation of the resultant dental pathology.

The most common conditions in which we considered extractions advisable were:

1. Partial avulsion: a tooth displaced from the alveolus and hopelessly loosened.
2. Fractures: of roots or crowns with exposed pulp.
3. Detached and stripped periodontal membrane from an otherwise firm tooth. Unless of minor degree, this condition usually resulted in the eventual loss of the tooth.

As mentioned previously, due to the use of chemo-therapy, the problem of the teeth as an avenue of infection affecting the fracture line was never a major concern.

Practically, it was often considered advisable to retain temporarily a condemned tooth, for the purpose of assisting reduction and fixation or avoiding additional traumatic manipulation of the fracture or wound. These condemned teeth were later extracted



A B

CASE NO. 336. FROM KODACHROME TRANSPARENCIES.

A typical G.S.W. loss of the anterior mandible with bone loss similar to case No. 223.
(a) Showing all bone covered and skin sutured to mucous membrance, following primary operation.
(b) Temporary chin and lip prosthesis of Vinyl Resin attached to dental splint for restoration of mouth function

when they were no longer useful, or when extraction was less traumatizing. Occasionally these retained teeth developed local infection with abscess formation and were removed. When this type of infection occurred, it usually developed within twelve or fourteen days following the injury.

It might be of interest to periodontists to mention that in the observation of several hundred fracture cases, in which the periodontal membrane was traumatically stripped from the root cementum of teeth, in varied degrees, we were unable to note any cases in which clinical re-attachment occurred.

The covering of exposed bone was essential to prevent infection, necrosis and sequestration. A few cases were encountered where it was impossible to re-attach the original soft tissue or to provide substitute coverage by local flaps without gross deformity. This condition was noted in cases of extreme retraction of the floor of the mouth from the stripped lingual surface of the mandible, and was followed by necrosis and sequestration. In these cases the sequestrum involved approximately the depth of the cortical plate, and was apparently determined by the limit of the defensive barrier formed by the internal or cancellous blood supply, following the loss of the external or muco-periosteal blood supply. Sequestration in these cases occurred in from eight to ten weeks and exposed a bed of granulation tissue, which proceeded to epithelialize over with normal mucous membrane.

An important factor during operations under general anaesthesia was the control of the patient by the anaesthetist.

Major R. A. Gordon, who was in charge of Anaesthesia for the Plastic Surgery Division, had perfected a synchronized technique for handling these cases, which ensured a well controlled maintenance of anaesthesia and allowed a smooth and rapid recovery of reflexes when desired.

Most of the general anaesthesia was a combination of pentothal for induction and cyclopropane with oxygen for maintenance[6].

Cyclopropane is an anaesthetic of high potency with the quality of rapid diffusibility and is used with a high oxygen percentage. These qualities require a delicate balance but allow excellent control of the patient.

All cases for mouth operations were intubated endotracheally by the nasal or oral route and the pharnyx was carefully packed off, thus eliminating any concern about aspiration of blood, bone fragments or teeth.

At the completion of an operation for jaw reduction, the anaesthetist would remove the pharyngeal packing and ensure a clean and dry throat by aspiration, following which immobilization was quickly completed. By this time, the patient was usually responsive with an active cough reflex and could be returned to the ward in the semi-prone position, for further recovery.

It was found helpful to impress upon the patient, just before induction, that his teeth would be wired tightly together when he awakened. This precaution helped to avoid the semi-conscious panic which otherwise occurred occasionally upon recovery.

In treating a few hundreds of these cases, we never found it necessary to remove fixation or cut wiring on account of post-operative vomiting.

Fixation

Fixation, or the mechanical means and methods which were available to control and maintain reduction of fractures, both crush and G.S.W., included a variety of appliances. However, in the interests of expediency, efforts were concentrated on the development and application of a few established and proven methods, which in practice were frequently used in various combinations. We believe that the relative standardization of techniques and appliances was an advantage in dealing with a large number of cases such as were encountered.

The selection of fixation for any case was governed by the objective to provide adequate and positive control by direct, efficient and reliable methods. These methods were of dental or surgical origin, and frequently a combination of both depending entirely on the requirements of each case.

There were a few cases of non-displaced fractures, mostly edentulous cases, which required no fixation other than that supplied by nature through the periosteum, muscles, and other tissues.

The desirability of early mobility for condyle fractures had to be considered when planning fixation for associated fractures of the mandible, and for these cases we often used cast-cap dental splints or external pin fixation.

Depending on the degree of dislocation of the condyle head, we approached the treatment of these cases with two alternatives. In the first instance, if the displacement was of minor degree and it was considered that union of the fragments would give satisfactory function the case was immobilized as for any other fracture. The alternative choice of treatment was determined by x-ray evidence of gross displacement and dislocation of the condyle head to such a degree that union in situ would likely result in ankylosis, in which case it was considered preferable to institute mobility of the mandible within two weeks of injury in order to establish a pseudo-arthrosis by encouraging fibrous union at the point of fracture.

Following is a brief outline of the fixation methods which were found most useful. Table No. II indicates

the relative frequency of application of the more common fixation methods. Many of these methods were used in combination on the same cases.

TABLE NO. II—TYPES OF FIXATION

Dental Wiring	Cast Cap Splints	External Pins	Head Caps	Intra-Oss Wiring
343	147	19	38	53

Dental wiring was used for both fixation and immobilization, and this was our choice of treatment wherever this method was applicable and adequate. To conserve operating time, considerable wiring was done in the dental clinic pre-operatively. For the satisfactory application of dental wiring, it was essential that a case should present a sufficient number of suitable teeth, strategically placed in relation to wiring requirements and fracture lines. Wiring methods had their greatest usefulness in the less complicated fracture cases but the versatility of wiring techniques made them applicable in numerous ways to the treatment of crush and G.S.W. injuries.

Our most useful appliance for wiring was an eyelet wire modification of the "Ivy loop", which was developed by Lt. Col. G. Franklin. These eyelets were pre-fabricated of dead soft stainless steel wire of .015″ ga. and were used extensively as dental attachments for retaining intermaxillary wiring.

We made use of the twisted arch wire type of fixation, as favoured by Dr. Fulton Risdon, particularly for fractures with separation involving the symphysis area, where suitable teeth were available. This type of wiring was found very useful in these and similar cases.

Arch bars of 14 ga. nickel silver wire with dental ligature wiring were used to a limited extent. Many cases with edentulous spaces or separated teeth in which arch bars could be used were treated by means of cast cap splints because of the more definite control which was obtained by the splint.

Advantages of wiring are:

1. Comparative ease and speed of application.
2. Visual observation of reduction, as indicated by the occlusion.
3. Lack of bulk, reducing the possibility of gum tissue irritation to a minimum.
4. Reasonably amenable to hygienic measures.

Disadvantages of wiring are:

1. Tendency to breakage and the development of slackness through stretching.
2. Provides less rigid control than cast cap splints.

These disadvantages were minimized through careful application of the wiring technique, but nevertheless considerable time and attention were required for maintenance.

Sectional cast cap dental splints of silver alloy with precision locks were the fixation of choice in dealing with certain types of cases, and these splints were second only to dental wiring in frequency of application. Our cast cap splints and precision locks were usually slight modifications of those used by British dental surgeons in their maxillo-facial centres and are described in detail by Fry, Shepherd, McLeod and Parfitt[2]. Most of our modifications were applied to the precision locks, bars, hooks and other attachments.

In selecting cases for cast cap splints, our decisions were governed by the number and position of the teeth available, plus the requirements of treatment. We found their greatest value in cases of multiple crush fractures and in G.S.W., where a more definite control than that attainable by wiring, was required. They were also utilized as anchorage for many types of extra-oral and intra-oral attachments.

In our production of cast cap splints, we preferred to allow sufficient time for detailed laboratory designing and careful fitting, rather than attempt speed for the sake of speed. There were only a few cases in which a few

hours' delay in the application of splints might have been harmful, and those cases were given priority of the technicians' and operators' time, day or night.

Our usual method was to take all necessary impressions during or previous to the primary operation, and temporarily immobilize the fragments with modified wiring. When the splint was ready, it was cemented in place and lock bars completed, in the dental clinic. This was usually done within 48 hours, depending on the patient's condition. The dental clinic was arranged so that the patient's bed could be wheeled in and the cementation of splints, final reduction, immobilization, etc., could be carried out in the bed. This was frequently accomplished with the aid of morphia and local anaesthesia.

For cementation, we depended on black copper cement because of its excellent adhesive qualities and its dependability under adverse conditions. After taking off the splints, the removal of the black copper cement required considerable diligence. This cement was inclined to leave a discolouration on silicate restorations and stains on certain natural tooth areas, but this disadvantage was outweighed by other considerations in the treatment of the seriously injured.

Well fitted cast cap splints produced remarkably little gingival reaction, even after prolonged retention. The use of carefully constructed and placed cast cap splints, which averaged .5 m.m. in thickness, did not produce subsequent dental mal-occlusion of any practical significance. The reasons for this seeming incongruity are explained by Fry, Shepherd, McLeod and Parfitt[2].

External pin or skeletal fixation of the Clouston-Walker type (Down Bros. Co.) filled a very definite role in our armamentarium and was used in many cases of crush injuries as well as battle casualty wounds.

We developed a high regard for the undoubted value and versatility of the pin fixation technique, when used in selected cases and in accordance with established principles of treatment.

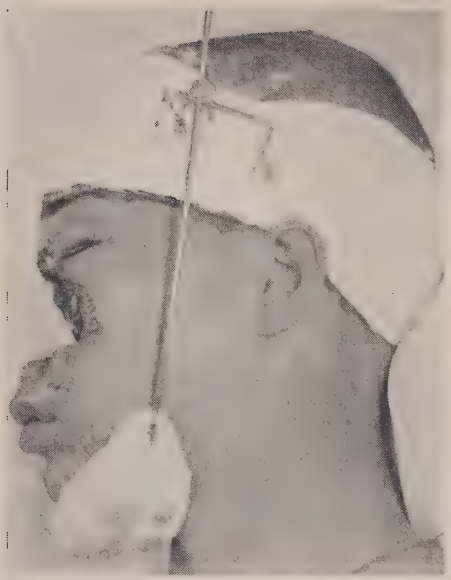
This type of fixation was employed to advantage in the reduction and control of fragments which were difficult or impossible to control by other methods. It was also used as an alternative to direct intra-osseous wiring.

Among the useful applications were:

1) Multiple fractures of edentulous mandibles with dislocated condyle fractures.
2) Control and repositioning of displaced and "floating" fragments during bone graft repair of loss following G.S.Ws.
3) In other cases where combinations of fixation were required for various reasons.

The external pin fixation technique did not eliminate the normal requirement for inter-maxillary immobilization in the early stages but was used in some cases of mandibular body and ramus fractures where early mobility was desired in the treatment of associated condyle fractures of the dislocated type.

The open reduction and direct wiring technique was used for fixation in many cases, which might have been handled, more or less successfully by other methods. The excellent results obtained through the close cooperation of the plastic and dental surgeons, was an important factor in favour of this method. This technique was used, particularly, in displaced fractures of the angle of the mandible, which are often difficult to reduce by non-surgical methods, on account of the usual medial and torque displacement of the ramus fragment, the very thin bone surfaces to be approximated, and the high prevalence of displaced periosteum and other soft tissue invading the fracture line. For this purpose, a surgical exposure of the fracture line was made and stainless steel wire passed through drill holes in the bone placed at appropriate points in each fragment. The wire was adjusted and



A

B

CASE NO. 607

(a) Showing facial loss with chin "cradle" as indirect support for maxilliary fragments.
(b) Temporary facial prosthesis of Vinyl Resin.

CASE NO. 607

The original bone loss. Subsequently a number of the anterior teeth and portions of the alveolar bone were removed but at this stage all teeth were retained to act as support for facial tissues and to maintain lip contour.

tightened as the fragments were reduced. Intra-osseous wiring of mandibular fractures required dental wiring, or other support, for the immobilization.

The Gunning, or denture type, splint was used in the treatment of a few crush type fractures of the mandible in edentulous mouths. Used with circumferential wiring of the mandible and per-alveolar wiring of the maxilla, it was found quite effective in these cases.

Head caps of plaster of paris bandage were used extensively as a point of attachment for many appliances, and these were usually applied over a stockinette, or silk stocking, cap. Metal brackets or heavy wire, imbedded in the plaster provided attachment for various extensions, used in the application of traction for reduction, or fixation during immobilization. Rods of ⅛″ stainless steel in conjunction with universal locks were one of our most useful appliances for head-cap extensions, and were used extensively for maxillary and multiple facial fractures. These rods were used either singly in the sagittal plane, or bilaterally, in combination with dental

CASE NO. 324

Showing bi-lateral adjustable rods from plaster head cap to maxillary and mandibular cast cap splints for fixation of multiple fractures following G.S.W. This also shows a plaster head cap designed for good stability. Appliance applied in Italy.

splints, wiring, external pins, etc.

A device, used as auxillary support, for maxilliary fractures via the mandible, and for other purposes, such as support for edentulous mandibular fractures, consisted of a mandibular cradle or sling supported by bi-lateral adjustable rods from a headcap and fitted under the mandible with a plaster pad, which was lined with flannelette.

The maintenance of mouth hygiene in the presence of dental wiring, splints, etc., was a constant problem, particularly with the seriously ill patients who were unable to help themselves. A routine of daily cleaning by the use of cotton swabs and irrigations was followed. As the patients' condition improved, they were encouraged to undertake this work for themselves and usually learned to use their tooth brushes without disturbing the fixation appliance.

The problem of feeding resolved itself into providing three special diets, containing high caloric values and fortified with vitamins, served at frequent intervals. These were known as Jaw No. 1 (liquid), Jaw No. 2 (pureed) and Jaw No. 3 (mashed).

These diets varied in caloric values from approximately 1800 to 2800, and in most cases produced a weight increase when the patient had settled down and learned to take his food regularly. The patient soon learned to introduce the food successfully by the easiest route. Where no tooth spaces existed, this route was along the buccal sulcus to the retro-molar space.

The testing of maxillary and mandibular fractures was carried out at the appropriate time by removing the retaining fixation, i.e. the inter-maxillary wires or splint locks or both, and by careful and gentle manipulation, noting the degree of mobility, if any, at the fracture line. Usually this was accomplished by grasping the two fragments, one with either hand, and exerting a slight leverage pressure. If union appeared present, the inter-maxillary fixation was not replaced and the patient was encouraged to passively exercise his mandible for a few days to overcome the disuse tris-

mus of the muscles of mastication, which was always present to a varying degree. After a few days, the fracture was again tested and, if union was confirmed, then the remaining fixation was removed and the patient was gradually returned to a full diet.

X-ray plates were taken to check the appearance of the fracture lines, bony structure, and the teeth, but these were not depended upon for final evidence of union, except in the negative sense in which non-union or other pathology was revealed.

(To be concluded)

ANNOUNCEMENTS

Dental Convention June 5-8, Saskatoon, Bessborough Hotel

The Convention of the Canadian Dental Association in cooperation with the Western Canada Dental Society.

In addition to the Essayists and Clinicians previously announced, there will be on the program Dr. Harry K. Brown, Director of Dental Services under the Department of National Welfare and Health.

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at The Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver anniversary of the inauguration of this annual event.

First Maritime Convention

The Convention will be held at the Algonquin Hotel, St. Andrews-By-The-Sea, New Brunswick, August 31 and September 1 and 2.

C.D.A. War Memorial Scholarships

The following have been selected to act as judges for this year's essays.

Dr. Thomas Cowling—University of Toronto.
Dr. Gerard de Montigny—University of Montreal.
Dr. P. Gitnick—McGill University.

The subject will be "The Relation of the Endocrines to Dental Development and Oral Health."

National Research Council
Associate Committee on Dental Research
GRADUATE DENTAL RESEARCH FELLOWSHIPS

The National Research Council of Canada offers a limited number of Fellowships for promising graduates in dentistry.

The Fellowships are designed to provide advanced training and experience in research in one of the sciences basic to dentistry. Fellowships will not be awarded to graduates in dentistry for the purpose of providing practical training and experience in the clinical branches of dentistry.

FELLOWSHIPS of the value of $1,500 per annum will be open to graduates in dentistry with high academic standing, who have spent at least one year in postgraduate training.

FELLOWSHIPS of value of $1,600 to $2,500 per annum will be open to graduates in dentistry who have had experience in research work. The value of the Fellowship will depend on the candidate's training and achievement in an original research.

In general, the conditions relating to qualifications, the submission of applications and the conditions governing tenure of these awards, will be found in the regulations governing Dental Research Fellowships awarded by the National Research Council.

Copies of the above regulations and application forms, may be obtained from the Dean of the Faculty of Dentistry or upon application to the general Secretary, National Research Council, Ottawa.

1 June 1949 is the final date on which application may be made.

S. P. EAGLESON, General Secretary, National Research Council

HOW TO PREVENT AND CONTROL TOOTH DECAY*

by DR. H. K. BROWN, Ottawa, Ontario

For the most part dental disease can be prevented and controlled. Much of it can be prevented outright. Most of that which cannot be prevented can be controlled by early, regular treatment. Both prevention and control depend more upon the efforts of a well-informed public than upon the skill of the dental profession.

The best scientific knowledge, and the highest professional skill possessed by the dental profession are of little value unless the people share that scientific knowledge and know how best to avail themselves of that technical skill in the best interests of good health. The greatest service that the dental profession can render to the public and their greatest responsibility is to share with them the scientific knowledge that makes for better general health, through better dental health. The best advice that I can give is to seek the advice and aid of your dentist to help in preventing and controlling your dental disease and that of your family, rather than to seek technical skill in the field of restorative dentistry after the teeth and gums have been destroyed by decay and pyorrhoea, and the health damaged during the progress of these dental diseases. In the past dentists were trained chiefly in dealing with the results of dental ill health. The modern dentist is trained in prevention and control. His efforts are aimed at maintaining the health, regularity and efficiency of the teeth and of the gums, with a view to attaining and maintaining the maximum health and efficiency of the whole body.

Prevalence of Dental Disease

Dental disease is a major health problem. Over 99 per cent of Canadians have tooth decay at some time in their lives. After 35 years of age more teeth are lost from pyorrhoea than from decay; 50 per cent of children 3 years old have one or more decayed teeth; 60 per cent of children 4 years old have one or more decayed teeth; the average child of 12-14 years has 13 cavities in his permanent teeth; the average person aged 40 years has lost 10 teeth—and many at this age have lost all their teeth. At the outbreak of World War II the dental standard for enlistment required that a recruit have half his teeth left, and meeting each other in a useful way; 23 per cent of those rejected for enlistment were turned down because they could not meet even this low dental standard. These were young men, 18 to 45 years of age, with most of them nearer to 18 years. They were young men but their mouths were old and crippled. Tooth decay and pyorrhoea had destroyed their teeth and gums and placed these men in a sub-standard classification. Their health was already either damaged or in jeopardy from infected teeth and gums, and the inability to eat efficiently or to eat a normal diet.

Since the turn of the century life expectancy has increased by about 20 years. This has been accomplished by the conquest of disease, chiefly through discovering means to prevent it. Our children are immunized against certain diseases; a sanitary water supply protects them against others; a pasteurized milk supply protects them against that great killer T.B.; inspection of animals at packing plants protects them against infected meat; a better knowledge of diet and nutrition builds better bodies; better diagnosis and early treatment protects them

*Public address at Ottawa Dental Society, Dental Public Health Day, March 14, 1949.

against the disease that cannot be prevented outright. These are some of the factors that give the children born today the hope of living nearly 20 years longer than those born in the year 1900. How much more could be added to the span of life by controlling tooth decay and pyorrhoea we do not know—probably it would be considerable. Certainly much would be added to the happiness and fulness of life. Dental infections seldom kill people by their direct effect; but they are known to give rise in other parts of the body to disease conditions that do cause disability and death. Painful abscessed teeth can affect the growth of a child by making it impossible for him to eat a normal diet, and by disturbing his rest and comfort. Food dislikes in children can often be traced to attempts to chew that particular food on an exposed nerve or an abscessed tooth. Examples too numerous to mention in the time at my disposal could be given to illustrate the relationship between dental conditions, general health, and probably longevity.

Cause of Tooth Decay

The cause of tooth decay is known. Some rather effective methods of preventing it are known. Also effective methods of halting it are known. If as much were known about preventing and controlling cancer, that dread affliction would be wiped out, or at least reduced to a point where it would cause almost no deaths. What are we waiting for? Why is tooth decay with its evil results not brought under control? I think that the answer is that as yet too few people know what to do about it, and too little about its ill effects. For over 50 years it has been suspected that sugar causes tooth decay. Now we know it. The evidence is conclusive.

If we know what happens in the mouth after eating sweets, we will be in a better position to understand the suggestions to meet the problem. There is a film between and around the teeth even in the cleanest mouth. Within a couple of minutes after eating sweet foods an acid is formed in this film. This occurs in most, but not all mouths. The acids formed in the film is strong enough to dissolve the enamel of the teeth. The acidity lasts for about an hour, sometimes longer. This period of acidity is repeated every time sweets are eaten, particularly if no other food is taken along with them to prevent their accumulation and concentration around and between the teeth. Every sweet snack taken between meals or at bed time means just one more acid period added to the ones that have already been created by sweet desserts. During this acid period enamel is being dissolved—i.e. an attack of tooth decay is taking place.

It would be very impractical to eliminate sweets from our diet. They are too universally popular. The average persons eats his weight in sugar every year (over 140 lbs.)—not because he needs it, but because he likes it. In past years when we discovered that milk could be dangerous to health we pasteurized it. When we found that water could carry disease we treated it to make it safe. When we found that sewage could carry disease we developed a scientific way of disposing of it. Each one presented a different kind of health problem that required its own special solution. Now it is found that sweets create a health problem. It should be solved in the most reasonable, practical way, with a view to eliminating only the evils, and retaining the advantages.

One simple and effective approach is to interrupt that acid period that occurs in the tooth film immediately after eating. This can be most effectively done by using the toothbrush as soon as possible. If this is not convenient, a mouth rinse of warm water is helpful, and if warm water is not available use cold water. The rinse is not as effective as the brush, but it can be very helpful if thoroughly done. It may be well to state at this point that there is not yet available any dentifrice or mouthwash that has more than a

cleansing effect. They have no medical action which prevents decay.

Another approach is to reduce the frequency of eating sweets—and the term "sweets" does not mean candy alone. It means any foods, confections or beverages containing sugar, such as cakes, cookies, pies, jams, jellies, pop, etc. If between meals, snacks are indicated, use fruit, for example, or if a sandwich is indicated, a peanut butter sandwich is a good substitute for one containing jam. If the family likes candy, probably the best solution to that problem is the occasional candy "binge", when everybody has a reasonably good "feed" and gets it over with. This is much safer than nibbling a candy or two every day and getting the largest possible number of attacks of tooth decay out of a pound of chocolates. The parents who teach their children the moderate, intelligent, practical way to use sweets, and instruct them in the use of proper and simple oral hygiene that should follow eating them, will be rewarded with healthier, happier children—and lower dental bills.

Fluorides

Much has been said about the use of fluorides to prevent dental decay—some of it true, and much of it quite untrue. It is correct that a solution of sodium fluoride properly applied to the teeth of children will reduce the incidence of new decay by 40 per cent, over a large group of children. This does not mean that it will prevent 40 per cent of the new decay in each and every child. Some children may not benefit by more than 5 per cent, others may benefit by 80 per cent or more. It is important to remember that point if your child receives this preventive treatment. It may be more, or less effective in his case than in the cases of other children. It does not in any case prevent all decay. It does not stop decay which has already begun. It is not likely to be nearly so effective in heavy sweets eaters, and in those who do not clean their teeth immediately after eating. However, it is well worth using. But anybody who gets the idea that all he needs to do is to use sodium fluoride, and neglect all other precautions, will be doomed to disappointment. It is just one of the things which if properly used will help in preventing decay. There is no evidence that fluoride tablets, fluoride tooth paste, or any other kind of dentifrice will prevent decay. Dentifrices are valuable only as cleansers.

Prevention

Nearly everybody will have some tooth decay despite his very best efforts at prevention. But it can be kept down to a minimum. Once decay has begun in a tooth it never heals up. There is no drug that stops it. The only effective treatment is a filling. The earlier a cavity can be found and filled the better. X-rays are an excellent means to discover cavities that are too small to be found by other means, particularly when they occur between the teeth. A cavity is never too small to fill. Those occurring in the primary teeth are just as important as those in the second teeth. They are even more important. These teeth are the child's means of chewing his food over his greatest period of growth and development—up to the age of 11 years. Diseased primary teeth can prevent adequate mastication, affect the choice of food, disturb the child's comfort and rest, give rise to infections in other parts of the body, and result in an irregular set of permanent teeth which will be more susceptible to decay and pyorrhoea than would a regular set. The old expression "only a baby tooth" no longer has any place in dental science. These are foundation teeth. To give them adequate protection, and at the right time, the child should be taken to the dentist before his 3rd birthday. This makes it possible for the dentist to begin preventive measures, and to do any fillings required while the cavities are small. The visit should be repeated two or three time a year. At the first visit arrangements should be made for the next appointment, and

a regular pattern of dental care established.

The prevention of any kind of disease depends upon how much the average person knows about it and what he does to protect himself and his family against it. The more we use medical sciences and the health professions of medicine, dentistry and nursing to prevent disease, or to treat it in its very early stages, the less will be our need for major operations of either the medical or dental kind.

There is a shortage of dentists in Canada today. There are two reasons for this shortage; the dental profession is being overwhelmed with demands to deal with the accumulated results of dental disease; and dental decay is occurring six times faster than the dental profession can deal with it! The answer lies not in what the dentists can do about it by the use of their instruments after the damage has been done. The solution lies in the use of all the best preventive measures, through the best possible cooperation between the public and the dental profession.

The Dental Health Day in Ottawa, is a gesture of the dentists of Ottawa to indicate that they stand ready and willing to share with the people of this city and district their knowledge of ways and means to combat dental disease through prevention and early treatment.

ANNOUNCEMENT

Postgraduate Courses at Tufts College Dental School

The following Graduate and Postgraduate Courses in Periodontology and Oral Pathology are being offered by Tufts College Dental School beginning the Fall of 1949.

PERIODONTOLOGY

Refresher Courses:

PR1 October 31 to November 1, inclusive—5 day full time course.
PR2 October 10 to January 16—12 day course. Each Monday for 12 weeks.
PR3 February 20 to May 15—12 day course. Each Monday for 12 weeks.
PR4 May 22 to May 26, inclusive—5 day full time course. "The Kirkland Technique" by Dr. Olin Kirkland.
PR5 June 5 to June 9, inclusive. 5 day full time course.

Graduate Courses:

PI 2 years specialist training program. For individuals interested in qualifying for certification.
PII 1 year specialist program. For individuals interested in qualifying for certification who have had one year graduate training.
PIII 18 month course leading to M.S. Degree.

ORAL PATHOLOGY

OPI 18 month course leading to M.S. Degree.
OPII 1 year course for individuals interested in obtaining specialized training in Oral Pathology.

Address inquiries to: Director, Graduate and Postgraduate Division
Tufts College Dental School
416 Huntington Avenue
Boston, Massachusetts.

If dental service were something that could be taken off the shelf and handed over to the patient in an original wrapper as turned out by a manufacturer, there would be good reason to feel that one is getting the same service no matter how little is paid for it. Since dentistry is a personal service which largely depends on the ability of the dentist, there can be no "one price" even for similar operations. To expect all dentists in private practice to charge the same fee would be as incongruous as asking all artists to charge the same fee for painting a portrait.—From Editorial in N.Y. Jour. of Dent.

ORAL HAEMORRHAGE

by SAMUEL M. BORDEN, D.D.S., M.S.D., Winnipeg, Manitoba

Haemorrhage is the copious escape of blood from the circulatory system either into the tissues or externally to the body surface. In surgery bleeding is anticipated, because it is the indicator of biological life and tissue vitality. Normal haemorrhage where blood flows for a limited time with clot formation, is a necessary result of surgery, because the clot acts as a pad of physiological tissue that seals the wound and acts as a mechanical barrier for its protection.

Whereas a limited amount of bleeding is desirable, excessive haemorrhage is not and it is with this abnormal bleeding that this paper will concern itself.

Haemorrhage may be classified according to both its time and site of occurrence. Primary haemorrhage occurs at the same time as the injury is sustained. In some instances the blood clot may be dislodged before it is completely organized. If this takes place within 24 hours of the initial injury the ensuing bleeding is known as intermediary or reactionary haemorrhage. Secondary haemorrhage is said to occur if the bleeding arises later than 24 hours after the original injury.

As to the site of occurrence, the classification may be divided into arterial, venous and capillary. In the case of the arterial the blood involved is oxidized, bright red and spurts in synchronization with the heart beat. Venous blood is darker in colour and flows steadily, while blood escaping from capillaries is intermediary in colour and oozes from a surface rather than from a specific point. It is with capillary haemorrhage that the dentist is most concerned, because this is the type involved in persistent, oozing, extraction wounds.

Haemorrhage may occur in the oral cavity from physical causes such as trauma or irritation from a spicule of bone in an extraction socket, disturbed metabolism, hypertension, blood dyscrasias, etc. In order for the dentist to maintain post-operative haemorrhage to a minimum, he must be able to recognize and evaluate patients with abnormal tendencies for bleeding. He must be thoroughly familiar with the mechanism of blood clotting, the untoward results of the deficiency of the raw materials necessary for blood coagulation and finally the means of either preventing or stopping the haemorrhage.

Mechanism of Blood Clotting

Let us at this time review the mechanism of blood clotting as suggested by Howell. This theory states that:

Prothrombin plus thromboplastin in the presence of calcium ions yields thrombin. The thrombin thus formed acts with soluble fibrinogen producing the insoluble fibrin clot.

In the circulating blood there is no clotting because of the presence of antiprothrombin, which is inhibitory to the inactive prothrombin. Upon the shedding of blood, disintegration of the platelets liberates thromboplastin, which neutralizes the inhibitory antiprothrombin, allowing the activation of the freed prothrombin by the calcium ions.

A deficiency of any one of the essential constituents may upset the complex clotting process. Prothrombin is formed in the liver, vitamin K, or the anti-haemorrhagic vitamin, being essential for its formation. Normally the prothrombin of the blood is much in excess of that necessary for clotting, but if it falls as low as 20 per cent of normal spontaneous haemorrhage or haemorrhages from slight wounds may occur.

Vitamin K, in addition to the amount ingested in food, is produced in the intestine by bacterial action. How the

vitamin is concerned in the production of prothrombin is as yet unknown, but the process is known to take place in the liver. Before the vitamin can be absorbed from the intestine bile salts are essential, so that in biliary fistula or in obstructive jaundice the haemorrhagic tendency can best be relieved by the administration of bile salts, together with a source of vitamin K.

Since the vitamin is produced in adequate amounts from putrefactive processes in the intestine, it is not probable that a deficiency of this vitamin can occur in the otherwise normal adult.

Although the deficiency of prothrombin in the normal individual is rare, it is now believed that this condition can be brought about through the addiction to certain drugs.

Rapp, working at Loyola University in Chicago, recently discovered in human beings a relation between acetylsalicylic acid ingestion and hypoprothrombinemia. To this prothrombin deficiency he attributes many cases of delayed haemorrhage following tooth extraction. He learned that by giving patients 8 tablets of 250 mgms. acetylsalicylic acid each, in a period of 8 hours, he could in two days' time set up a prothrombin deficiency which would almost double the normal clotting time. He also discovered that this hypoprothrombinemia is preventable by the daily ingestion of 2 mgms. of menadione. (i.e. synthetic vitamin K).

Another vitamin concerned with haemorrhage is the antiscorbutic vitamin C. A deficiency of this vitamin is characterized by swelling of the gums, haemorrhage into the skin and subcutaneous tissue and bleeding from mucous membranes of the mouth. It is seen only rarely as the disease scurvy, but is slightly more common in the subclinical stage. The abnormal haemorrhagic tendency is due to a capillary fragility which can be successfully treated by massive doses of vitamin C, sometimes as high as 500 mgms. being administered daily.

More recently it was discovered that the peel from citrus fruit contains a fraction, named citrin, which influences capillary permeability. This vitamin, named P because it is the permeability factor, acts independently of Vitamin C and does not control the large subcutaneous haemorrhages characteristic of the scorbutic state.

The conditions arising from vitamins C & P deficiency may be differentiated from the more serious haemorrhagic diseases, by virtue of the fact that both bleeding and clotting times are normal.

Next on the list of materials necessary for the clotting of blood is serum calcium. In former days, whenever a patient presenting with a history of excessive bleeding he was immediately given massive pre-operative doses of either calcium lactate or calcium gluconate. In recent years this practice has declined, because it has been shown that a deficiency of serum calcium is never so great in the otherwise normal individual, as to be the cause of a haemorrhagic condition.

Fibrinogen is a soluble protein found in blood plasma. It is produced in the liver and as a result there is a reduced amount in the blood following chloroform poisoning. Fibrinogen is readily regenerated in several hours following the loss incurred by extensive haemorrhage and in the event of a deficiency, the material can be restored to the body by transfusion of plasma or whole blood.

History

In any practice where dental surgery is being performed, the taking of a short history is highly desirable. Valuable information may be obtained by simply asking the patient whether excessive bleeding has been noted in the past and whether any drugs have recently been taken. The latter question is to rule out the recent ingestion of benzene ring compounds, such as aminopyrine. This drug, when taken by allergic individuals, is believed to be responsible for

causing one of the most insidious of the blood dyscrasias, namely, agranulocytic angina.

The condition was first described in 1922 by Schultz. Since that time it has aroused considerable interest for over 500 deaths per year are recorded from this disease in the United States alone. Since over 80 million, 5 grain doses of aminopyrine are administered in the U.S.A. annually, there must be an allergic manifestation necessary for the production of the disease. Since extraction in the presence of agranulocytic angina is invariably fatal, the advisability of taking a short history is readily apparent.

Prophylactic Measure

As a prophylactic measure it is also highly desirable for bleeding and clotting time tests to be taken before any surgical procedures. This is naturally not practical as a routine precaution before every extraction. These invaluable diagnostic aids should, however, be used more frequently in the case of debilitated, anaemic-looking individuals, or those presenting with previous histories of abnormal bleeding.

Both the bleeding and clotting time tests can easily be performed in the office by the dentist or his assistant. Duke's bleeding time test consists of pricking the finger and noting the time it takes for the drop of blood to close the skin puncture and stop the bleeding. The drop is continually tested with blotting paper, and if no more blood is absorbed after approximately three minutes, the bleeding time is normal. The test is indicative of the capillary response to injury.

The coagulation time is the time which it takes for the blood to clot after it has been shed. A drop of blood is drawn into a 4-inch capillary tube. A section of the tube is broken off from time to time and coagulation is said to have occurred when fine threads of fibrin appear between the ends of the broken sections of the tube. The normal clotting time is around five minutes. Where there is any marked increase in either the bleeding or clotting times, medical consultation should be obtained immediately.

Because of the serious nature of the blood dyscrasias, it is imperative that the dentist be aware that these conditions may manifest themselves in the mouth and resemble local conditions. The most common signs and symptoms are pain in both the teeth and mucous membranes, petechiae on the palate, cheek and floor of the mouth, accumulation of large blood clots in the buccal membrane and a highly coated tongue.

The gingivae may resemble those found in Vincent's infection and in cases of supposed fuso-spirochetal disease which are not cured after several weeks' treatment, the blood dyscrasias should immediately be suspected.

Even more important than the ability to recognize abnormal haemorrhagic tendencies is the ability to control haemorrhage once it has occurred. This can be accomplished by either local or systemic means.

Local Control of Haemorrhage

The most common local method is the use of pressure with the aid of a gauze sponge. In bleeding from an extraction wound the sponge is placed over the bleeding area and maintained by biting pressure. Where prolonged compression is desired, softened compound may be placed over the gauze, biting pressure applied, and a Barton bandage tied to facilitate the maintenance of an even steady pressure on the oozing surface.

Where gauze pressure alone is insufficient in arresting the haemorrhage, suturing should be attempted. The application of the sutures is usually a simple matter and invariably is sufficient to stop any capillary bleeding of non-systemic origin.

In addition to gauze pressure and suturing, there are various topical haemostatics available as adjuncts. The most commonly used are adrenalin, ferropyrine, tannic acid, Russel's viper snake venom, thromboplastin, etc. Whereas the aim of these drugs

is the same, their pharmacological activity varies.

Ferropyrine, tannic acid and alum all act by precipitating the proteins of the blood, thus tending to form small plugs in the mouths of the bleeding vessels. The proteins of the tissues surrounding the bleeding vessels are likewise precipitated and by shrinking tend to constrict the vessels.

Upon local application adrenalin penetrates the tissues, stimulating the smooth muscles in the walls of the arterioles and capillaries. This decreases the flow, thus allowing a clot to form in the constricted vessels. If, however, the action of the adrenalin wears off before clotting occurs, the bleeding resumes.

The venom from the Russel's viper, when applied locally in concentrations of 1:10,000, will frequently bring about clotting in even the most stubborn of cases. The drug, which has been used successfully in several cases of haemophilia, contains a proteolytic enzyme which converts prothrombin into thrombin. In addition to this action it is believed that the venom acts by setting free thromboplastin from the platelets.

In addition to these local coagulants capillary bleeding may be stopped by the use of low heat cautery. The cautery acts by the precipitation of proteins and is as a rule very effective.

One of the sites from which bleeding is most persistent following extractions is bone tissue. Where bleeding can be seen to occur from the bone, it can usually be halted by burnishing bone wax over the area.

Where a larger sized vessel is involved, it may be necessary to clamp and ligate it. Sometimes, however, this is not possible. Friedman cites an interesting case where he inadvertently severed the greater palatine artery as it arose from the posterior palatine foramen. In attempting to ligate the vessel he discovered that it was too high in the pyterygopalatine canal and that it could not be grasped with haemostats. He ingeniously devised a cautery by inserting a burnisher into an open flame. Then by applying the heated burnisher to the end of the severed vessel in the canal, he managed to obtain haemostasis.

The most recent advance in haemorrhage control has been brought about through the use of absorbable materials such as fibrin foam, gel foam and oxycel, impregnated with thrombin. The advantage of the absorbable material is that after the blood flows into its meshes it becomes an integral part of the blood clot, acting as an impenetrable barrier to foreign matter. The material itself is haemostatic, but its usefulness is increased tremendously by the impregnation of human or beef thrombin. It will be recalled that it is the thrombin which converts the soluble fibrinogen into the insoluble fibrin clot. Therefore, by applying the thrombin directly to the bleeding point, the primary step in the clotting process is circumvented. This brings about a much more rapid clotting, under practically all circumstances that are normally encountered.

Of late the author has been using an experimental sea-weed derivative with remarkable success. The mode of action of this new substance, Alginic Acid, is as yet unknown, but in hundreds of routine cases in which the material has been used, bleeding has been stopped practically instantaneously.

This acid, which is in the form of a powder is particularly useful in stopping the haemorrhage in cardiac patients, in which a minimal amount of epinephrine is used in the local anaesthetic. In addition to its amazing haemostatic properties, the Alginic Acid acts as a protective coating for the blood clot, with resultant abnormally rapid healing.

In practically all cases, post-extraction haemorrhage can be controlled by one of the various local methods. The odd patient may require systemic intervention.

In certain cases of undue capillary fragility subcutaneous injection of

Moccasin snake venom, 1:3,000 solution may be advantageous. The most practical and most frequently employed systemic method is the repeated transfusion of whole blood. This is preferably utilized pre-operatively, in an attempt to bring the bleeding and clotting times back to normal levels.

A MORE EFFICIENT TOOTHBRUSH HEAD

by W. J. MASON, D.D.S., Richmond Hill, Ontario

The functional adaptability of a toothbrush head is in its ability to comply with the physical properties of the individual teeth and soft tissue parts. Thus must be considered the dental anatomy of the teeth with regard to their various widths, mesiodistally and buccolingually, and also their different surfaces, such as flat, concave, convex, pit and fissure. The soft tissues involved are the interproximal papillae and gingival margins and flat surfaces. Physically adaptable toothbrush heads of the conventional design were found to be poor in the matter of functional adaptability as their coverage was uneven and trauma was present. By a process of trial and error it was found that on dividing the space between two tuft centre points into 3 or 4 equal segments, and placing a single tuft on each dividing line, coverage became continuous and trauma negative.

In material construction all toothbrush handles were of plastic, but both nylon and natural bristles were used. It was found that synthetic bristles were superior to natural with regard to use and abuse. A more uniform flexibility per tuft could be obtained with nylon, also the natural bristle had a greater tendency to fatigue and fracture. When used with hot water the natural bristle warped excessively in comparison to nylon.

The factors which determine the efficiency of a toothbrush head may be classed as follows:

Physical adaptability
Functional adaptability
Material construction
Use

A toothbrush head to be physically adaptable should be of a size such that it may be easily inserted into the oral cavity without excessive distortion of the cheeks or causing discomfort to the tongue. The trim of the bristles should be of a design which gives contact of all the bristles to the exposed enamel surfaces and the soft tissues or mucosae.

The following chart was determined from examinations of numerous mouths and models, and taking into consideration the following anatomical structures:

(1) shape of arch: (large and small) re taper, square and ovoid.
(2) width and depth of buccal and labial folds.
(3) tolerance of tongue to displacement.

SIZE OF TOOTHBRUSH HEAD
BRISTLE DESIGN

Child—3 row, 6 knots, length ¾″, width 5/16″, height ⅜″

Youth—4 row, 7 knots, length ⅞″, width ⅜″, height 7/16″

Adult—3 row 7 knots, length 1″, width ⅜″, height 7/16″
straight trim—straight handle

Child and youth drill hole No. 49—bristle No. 9

Adult drill hole No. 45—bristle No. 11

The toothbrush head illustrated Fig. 1. consists of tufts of bristles arranged in diagonal parallel and longitudinal rows, in such a manner that there is only one centre point of a tuft of bristles on a line drawn through the

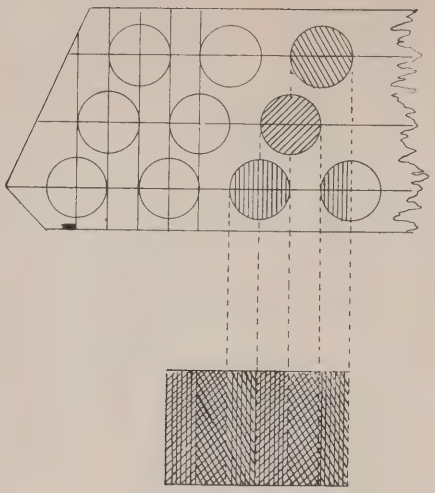


FIG. 1, Toothbrush Head

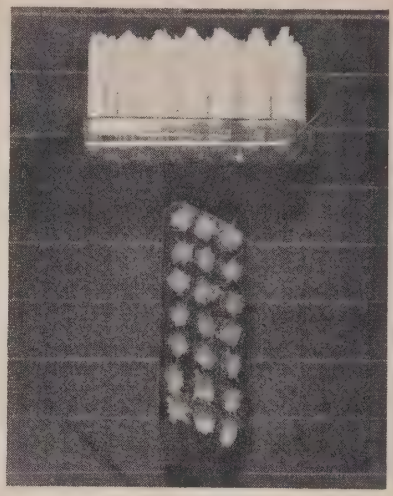


FIG. 2. Diagonal Parallel Rows

same centre point at an angle of 90° to the longitudinal rows. The tufts of bristles are so arranged that in an area segment formed by two adjacent centre point lines, the portion of bristles in the area make up by volume one tuft of bristles, more or less.

From the foregoing it will be evident that in using a toothbrush head of this design, as it moves from the gums along the long axis of the teeth to the biting surface, the surface of the soft and hard tissues which is missed by the first row of longitudinal tufts, due to the spacing between the tufts, is covered by a definite portion of the tufts in the second and third row. Thus surface coverage is continuous.

Also this arrangement of tufts of bristles does not allow the tufts to build up points of high pressure by contact one against another. Thus a safe, uniform pressure contact is obtained.

Figures 2 and 3 show clearly the difference between model C-3 and the better conventional type.

ADULT SURVEY—OCTOBER, 1948

No. of patients—30
Time lapse—28 days

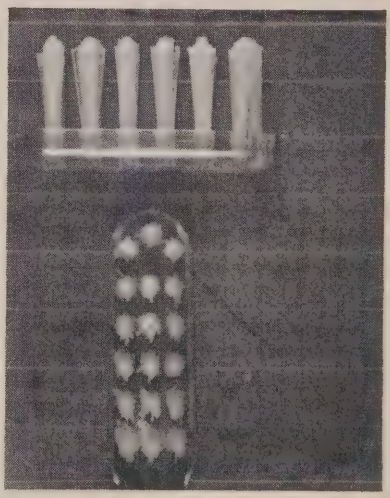


FIG. 3. Ordinary Rows

DESIGN

tuft space	—4 mm. centres
longitudinal row spacing	—3 mm. centres
tuft size	—2 mm. drill holes
bristle tufts	—nylon (under 3.5 "Brinell")
cut of tuft	—to cone of 90°
trim	—straight
handle	—straight

DESIGN SIZE—3 row, 7 knots, length 1", width ⅜", height, 7/16".

RESULTS

Physical adaptability re square, taper, and ovoid arch	—good.
Functional adaptability coverage	—good.
Interproximal spaces	—reached easily.
Gingival margin contact	—good.
Contact pressure	—uniform.
Flexibility	—good.
Abrasion or trauma of soft tissues	—negative.

REMARKS—All 30 mouths showed improvement in cleaner teeth and better tone of supporting soft tissues.

In conducting the surveys of each model, the patient exchanged his or her old toothbrush for one of the model being tested. Patients were individually instructed, both orally and self-manually, in the accepted conventional manner of oral hygiene. At the end of four weeks the brush was returned and the patient's mouth reexamined against the original chart.

It is not claimed that this design of toothbrush is the complete answer to perfect oral hygiene, but results and surveys show that it is better than the present type in that its physical and functional adaptability is more efficient in relation to the physical properties of the structures of dental anatomy involved in oral hygiene.

Dentistry is again faced during this legislative period with the antique proposal of the State going into the business of overall health care and dental care. It is a political trick that is supposed to "save face" for the politician. The citizen and taxpayer is due to "lose face" and his pocketbook in the shuffle if any of these compulsory health insurance bills become law. Would that the citizens could realize they will be giving up what they have, or can have today, of their own free choice, for a nebulous, costly political promise of Utopia in health!

It has been reported that all the dentists in this great State of California are busy the full workday, and many of them with more work than they can do; and they now have plenty of incentive in their work. How can anyone (particularly those who have been in the armed forces) conceive the possibility of any more people getting any more dental care by placing a middleman (the State) between the patient and the doctor! Middlemen are too frequently "muddlemen" (as in the Veterans Administration) and exact a high dollar recompense for their position.

This is the day to speak forthrightly and let it be known to all whom you see and talk with that compulsory schemes too frequently compel you to do and pay against your better judgment. They ultimately remove your right of choice (and your freedom), destroy private enterprise, force you to pay for someone else's services, and to hire someone to do what you, yourself, can do (bureaucracy). In health, they have always caused a lowering of the standards of the services received. Everyone cannot receive what is promised, for the essence of insurance is that only a portion of the participants get benefits at a time, and some never.

A free economy has built a great United States of America, which has lately been feeding a large portion of this world, proof of what a free economy can do.

A free economy has permitted the building of the finest dental profession in the world in these United States.

In California, the dental profession is working toward the maintenance of the high standards it is known to have created. The profession, with vision, understanding, and preventive procedures which are developing, can keep abreast of its problems and render its usual good stewardship to its patients.

The public in California needs no middleman to get its health care.

The dental profession in California needs no middleman to hamper its ability to render dental care to those who seek it!

There is no valid reason for this middleman, or any State compulsory health insurance scheme, except for the greedy politicians and tax collectors!—From Editorial in Jour. of California State D. Assoc., April 1949.

The Forum

WHITHER MEDICINE AND DENTISTRY

by HOWARD REID CRAIG, M.D.
Director, The New York Academy of Medicine, New York, N.Y.

Condensed from N.Y. Jour. of D., April, 1949

The two professions have much in common, in education, in the requirements for admission to professional schools, the general character of the curricula, methods of pedagogy, educational objectives; and the character of the students and of the teachers all show this striking resemblance. Our tradition and our backgrounds stem from the same root.

In the field of research, each is dealing with the same biological organism, the same chemistry and metabolism, the same processes of generation, regeneration and degeneration, and each employs much the same technique and methods.

All these parallelisms lie on the academic side. For those of us who have practised for a goodly number of years, the community of interest, problems and social adjustments of the two professions are being made plainer and plainer in these days of turbulent social realignments. Dentistry and medicine have the same objectives, the same patients, often the same methods or principles of methods; the work of each often overlaps or intertwines itself with the work of the other.

But this is not to say that the two should be merged, that one should assimilate the other. Let there be no misunderstanding about this. It was Dean Frederick Van Beuren who wrote in 1932, "You may call dentistry a specialty of medicine, but that does not make it so; and it is none the less valuable for that fact." And he goes on to say, "Whatever their future relationship may be, let medicine and dentistry now go forward side by side as friendly collaborators in the estimable undertaking of offering help to those who need it and adding to the happiness of life as much as to the length of its span."

But perhaps we have been a bit myopic in our focus. Our introversion has aimed itself almost entirely at self-improvement. We have carried clinical and laboratory research to levels hitherto undreamt of. But in so doing, the average dentist and physician has failed to recognize the social changes going on about him, or if he has noted them, they have been merely as passing phenomena. He has failed to correlate them with his own profession or has failed to realize that his own circumscribed professional world is only one niche in a social structure that has been and is undergoing changes that bear directly on him and his living. He is like a man digging a ditch. The deeper he digs the ditch of his own professional specialization, the more difficult is it for him to reach up to peer over the world about him. His professional relationships have been mostly personal ones and well it is that this has been so, for the *petros*, the rock on which dentistry and medicine has been built, is one of personal service. Raymond B. Allen, President of the University of Washington, has well written: "Medicine, with its age-old concern for the sick,—the poor as

well as the rich,—the weak as well as the strong, has been an influence for good surpassed only by the moral precepts of religion. The services of medicine, like those of religion, have been largely personal. While there will always be a need for personal services, medicine of the future, if it is to progress as a social as well as a biological science, must broaden its outlook and adjust its educational program accordingly. Medicine is coming of age as a social science in the service of society. It takes a man, not a machine, to understand mankind." And I take that last to be not only a mechanical machine, but a political machine as well.

And mark well, I ask you, President Allen's words that medicine and dentistry too, I add, are coming of age as social sciences. If you are skeptical of this fact, remember Germany's medical practice before the last war; look at Sweden; see what is happening in New Zealand, and finally, look, if you have courage, at Britain. And if anyone believes it can't happen here, let him read Mr. Ewing's report of last September to the President.

However, let us approach this social problem not in a spirit of bias, prejudice or hysteria, but rather in a cold, sober, sane and objective manner. Let us admit at once that the health, safety, well-being and happiness of its citizens is a responsibility of this democratic government—and may I add that this is a relatively modern concept, at least in this country, of federal governmental responsibility. To my mind, there can be no question that safeguards for the welfare of our children, nationwide, constitute a moral, federal responsibility. There can be no question that the aged, indigent and the medically indigent are a public responsibility for our government which should be a government for all the people without a means test or any other test. There is no doubt that in spite of the high level of dental and medical care in this country that this excellent care is not available to all the people. In other words, there are large areas in this country with few doctors and fewer dentists, and many of them poorly trained, many counties with no public health supervision and no hospitals or other ancillary services that go to make up good comprehensive medical and dental care.

To date, to my knowledge, there have been five health bills introduced into Congress.

These bills are dead and cremated, but from the ashes will arise a Phoenix which will make its appearance on the floor of Congress almost any day now, and it behooves the rank and file of our two professions to study carefully what the course and what the extent of the flight of this bird shall be. It is not enough to say that we are against this and against that and against the other thing. The wave of social thinking has been at our feet for some time. Let us not be Canutes. It cannot be stopped and should not be hindered; and it is our duty as thinking citizens of the professional class to offer, in this case, constructive ideas which shall underlie any proposition to improve the health of each state.

Having ascertained the needs, the administration of any health program should be decentralized and put in the hands of the state governments and these delegated, if possible, to the county or local level. It is axiomatic that in health services the closer the administration is to the consumer, that is, the individual patient, the more effective is the service. Control from Washington should be nominal, coordinative and supervisory, limited in great part to the setting up of minimal standards and seeing to it that these standards are met.

The New York Academy of Medicine's report on Medicine in the Changing Order came out whole-heartedly for health insurance on a voluntary basis, feeling that in the absence of experience, the sudden enactment of nation-wide compulsory insurance might be an act not only irrevocable, but as well calamitous to a sound evo-

lution of the health insurance idea. With that I heartily agree. Voluntary insurance would be flexible by very reason of the varieties of ways in which it might be managed and at the same time would make possible experiments in given areas, both as to the manner of payments and the services rendered. It would gradually amass valid actuarial data on which a sound insurance system might be based. The Academy would also welcome a trial of compulsory health insurance over a limited area to determine factually its virtues and its defects before imposing it on the whole nation.

The problems are complex and the ultimate solutions may be devious, but that is all the more reason for all of us to apply our minds with understanding and broad vision, not with rancor or self seeking, to those means which will provide better health and happiness for more people in this nation. That is the main objective, the attainment of which will add lustre to the professions of which you and I are proud to be a part.

Any dental health care plan, to be successful, must be based on sound actuarial experience, maintain the high standard of dental service to the public, and must not endanger or jeopardize the personal relationship between the patient and the dentist. Freedom of choice of dentist by the patient must be ensured. Dental fees must be commensurate with the fluctuating standards of living, and complete dental autonomy must be guaranteed. Dental health legislation should provide regulation, supervision, and control of the plan by the dental profession alone, free from, and independent of, any outside agencies, bureaucratic or otherwise. I envision success for any plan where the welfare of the public and the interests of the dental profession will be conserved. —Pres. First Dist. D. Soc. of N.Y. in N.Y. Jour. of D.

"Come right over, honey. I'll slip you in!"

Copyright Medical Economics

PULPLESS TEETH

by EDGAR D. COOLIDGE, M.S., D.D.S., Chicago Illinois

Summary of paper in Jour. of Ohio State D. Assoc., Feb., 1949

There has always been a search for remedies that will destroy infection and neutralize bacterial products with the least amount of damage to the living tissue cells. In other words, the therapeutist should seek to aid nature by removing obstacles from her path but should never hinder her by inflicting an additional burden of tissue damage and necrosis while trying to assist. The most important factor in the use of penicillin is that it can be freely in contact with periapical tissue with no apparent evidence of irritation or tissue damage. Since sulphanilamide is only effective when in contact with tissue and leukocytes it is not very effective as a remedy to seal into root canals without contact with the periapical tissue. Penicillin is bacteriostatic and bacteriocidal to most micro-organisms found in root canals as was shown by Buchbinder but has been shown to be most effective when in contact with rapidly developing infection and should be used in strong solution. Buchbinder estimated the capacity of an anterior root canal to be approximately 5,000 units when a suspension of calcium penicillin in oil of 100,000 units per cubic centimeter was used by injection into the canal with a small syringe. This solution retained a bacteriostatic effect for a week at a time in the root canal.

The writer's experience with a hot sulphanilamide solution has been limited to a small number of cases but it proved helpful where an acute or chronic abscess had drainage through a fistulous tract. In a small number of cases in which penicillin solutions were sealed in root canals on absorbent paper points no distinct advantage was observed. Benzylog has been used in 25 cases of various types except acute abscesses and the results have confirmed the report of Casey, Burney and Rapp. It has definitely reduced the number of visits necessary to obtain two successive negative cultures.

The following principles should be recognized:

1. Pulpless teeth are not dead teeth.
2. Pulp removal and root canal filling has been proven successful in clinical practice and verified by histological studies.
3. Improved methods of treatment have lowered the percentage of failures and greatly increased the percentage of success.
4. Vital pulps have been shown to possess the mechanism and potentiality of healing and repair.
5. Biologic adaptation of pulp remnants into fibrous and hard tissue after pulp removal and root canal filling has been shown to be nature's method of making successful results where living cells have not been damaged.
6. Periapical tissue becomes involved during pulp inflammation and its degeneration is progressive unless checked by proper treatment.
7. Pulp removal is a surgical treatment and only surgical technique should be employed.
8. Culturing has been shown to be essential to prove sterility of the canal.
9. Root canal fillings should not pass beyond the dentinocemental junction but should reach the pulp stump where the vital pulp has been removed and should close the apical foramen where the entire pulp is removed or when the tooth is pulpless.
10. Infection and bacterial products can be eliminated by various methods and different kinds of medication. The thoroughness of the technique is most important.
11. Most periapical disturbances can be successfully treated and the inflammatory areas will usually disappear by a regeneration of the periapical bone and periodontal tissue without root resection.

12. Newer antibiotics and germicides seem to reduce the number of treatments required to obtain negative cultures. When these remedies fail the conventional remedies appear to be effective and vice versa. Neither antibiotics nor commonly used drugs are germicidal to all types of microorganisms.

RHYMES AND REASONS

by EDWARD SAMSON, F.D.S.R.C.S., Eng., F.C.S.

Excerpt from Dental Magazine and Oral Topics, Dec., 1948.

To find a truly happy man in these days of grim austerity affects me as did the finding of a four-leaved clover in our childhood. To hear of a joyous spirit, singing his way through our days of uncertainty to the forbidding future—is to hear again the lark doing its best to live up to Shelley. Yet this rare thing I have discovered. Unguardedly, a patient chatting to me recently told me that her last dentist always recited poetry to her the entire period of her treatment. "Of course," I suggested, "apt quotations from the immortals, or perhaps a cheery sonnet to distract?" "Not at all," she countered. "They were all his own composition. And quite good ones, too."

And that is the simple story of my unique discovery. First we find a dentist with the soul of a poet, inspired to sail over life's hazards on the waves of verse. But not only over life's hazards—over all those more frightful ones that beset a dentist. That indeed, must be a man of high purpose and lightness of spirit. Some of us may find it hard enough at times to mumble a polite monosyllable, or to agree that the weather is unseasonable, or that the Government is the cause of all disaster, temporal and spiritual. When the arches are dropped, the veins more than ever varicosed and the muscles never so fibrotic, how can a man respond to the trivialities of social intercourse? How? Yet here is a man, a superman, who can rise above his depressions, surmount the defects of his existence to reach a summit where, daily and hourly, he sings his way, one metrical step after another.

Reproduced by kind permission of Edward Samson, F.D.S.R.C.S. Eng., F.C.S. and Dental Magazine and Oral Topics.

It may happen that I shall find solace in that which brings sorrow to you; and that which to you speaks of gladness may be fraught with affliction for me. But no matter—into your grief will enter all that I saw of beauty and comfort, and into my joy there will pass all that was great in your sadness.—Maeterlinck.

PENICILLIN

by ELSE RASMUSSEN of Denmark

Summary of Paper in Tandlaegebladet, October, 1948

The effect of penicillin has been examined by experiments in vitro as well as in vivo. In vitro it has been found that the effectiveness of penicillin is somewhat diminished when it is in contact with eugenol-zinc-oxide, while this is not the case when wax is employed. In vivo, penicillin was found to keep its effectiveness in the root canal for 3 or 4 days. 29 teeth with necrosis of the pulp and apical periodontitis were given treatment (irrigation with solution of penicillin 20,000-100,000 int. units per c.c. application of paperpoints with 2500 to 5000 int. units of penicillin). Among these 29 teeth the microbes of 11 root canals were sensitive to penicillin while the microbes in the remaining 18 root canals were resistant to penicillin.

In 5 of the 11 cases a sterilization of the contents of the root canals was achieved. As it was expected, the contents of the root canals did not become sterile in any of the cases in which the contents of the root canals were resistant to penicillin from the beginning.

Renewed tests of resistance made after the penicillin treatment of the 6 of the 11 cases in which the root canals did not become sterile showed that now the microbes of the root canals were resistant to penicillin.

Thus penicillin has here been found not suitable for the treatment of pulp necrosis and apical periodontitis.

PHYSIOLOGY OF THE PULPLESS TOOTH:

Is the Pulpless Tooth a Dead Tooth?

by M. B. AUERBACH, D.D.S., New York, N.Y.
Assistant Prof. Pulp Canal Therapy. N.Y. Univ. College of D.

Condensed from Jour. of D. Medicine, April, 1949.

The statement is often made that a pulpless tooth is a dead tooth, a foreign body. The claim is that this dead tooth is more susceptible to decay than a tooth with an intact, vital pulp. "Dead teeth" are very brittle and dry and much more susceptible to fracture than "normal" teeth. It is even said that a pulpless tooth cannot withstand normal biting pressure. It is sometimes added that the total biting pressure is reduced by the presence of pulpless teeth in the mouth.

The implication of all these statements is that the pulpless tooth is very different from the vital tooth, when the truth is that a pulpless tooth performs the same function as an unaffected tooth. Its physiology is only slightly altered. It performs a full role in aesthetics, speech and mastication. It continues to maintain the continuity of the arch. It continues to function as a force in the development of the jaw and the masticatory apparatus. It allows for the maintenance of a healthy periodontium.

A pulpless tooth remains a vital tooth—not a dead tooth.

In a pulpless tooth, the cementoblasts continue to deposit new layers of cementum. This maintains the integrity of the epithelial attachments and the dynamic adjustments of the periodontal membrane to tooth movements in mastication. The cementum also acts as a reparative agent. It can and does seal off the apex of the treated tooth. These functions of the cementum are of extreme significance to the health of the dental structures.

In the stage of repair new layers of vital cementum are produced and the continuity of the lamina dura restored. When the crown of the treated tooth is restored mechanically, the normal func-

tional stimulation results in the development of a normal, healthy periodontal membrane.

With the cementum alive and performing its reparative function, with the periodontal membrane intact, the tooth is a live, healthy, functioning member of the masticatory apparatus. The pulp, a possible source of infection, has been removed. The properly treated pulpless tooth can perform as well as a vital tooth. It is just as vital in terms of function. Thermal response is no longer present; the pulp is no longer present to carry sensations of pain. The tactile sensations transmitted by the periodontium remain unaltered.

The presence or absence of the pulp is not an aetiological factor in the incidence of caries. This is substantiated by the work of Feldman and Lefkowitz. They examined a large number of roentgenograms of pulpless teeth for proximal caries. They found that the incidence of caries in pulpless teeth was no greater than in vital teeth. In fact, the incidence was slightly lower in pulpless teeth.

The art and science of pulp canal therapy has arrived at a point where no tooth need be extracted simply because of pulp involvement. A tooth treated by modern, aseptic methods — restored to function, is a masterful achievement in surgery and therapeutics.

THE STABILITY OF AQUEOUS SOLUTIONS OF SODIUM FLUORIDE

by WILLIAM B. SAVCHUCK, B.S., D.D.S., and WALLACE D. ARMSTRONG, Ph.D., M.D., Laboratory of Dental Research, Department of Physiological Chemistry, University of Minnesota, Minneapolis, Minn.

Summary of paper in Jour. of D. Research, Feb. 1949.

Storage of aqueous sodium fluoride solutions of approximately 2 per cent in stoppered borosilicate glass flasks is apparently without significant effect upon either the solution or the vessel over a six-month period. By contrast a dulling of the inner wall of the container and an increased alkalinity result from the use of "lime" glass prescription ware. Sedimentation occurs in those solutions in soft glass containers exposed frequently to the atmosphere. The pH's of all solutions stored in Pyrex show a consistently lesser increment in alkalinity than pH's of solutions contained in "lime" glass. The effect of storage in the dark or on the laboratory shelf upon the stability of a 2 per cent sodium fluoride solution seems inconsequential.

ANNOUNCEMENTS

The Annual meeting of the Northern Ontario Dental Association will be held in the Empire Hotel, North Bay, on Saturday, September 8.

Dr. Douglas Tanner, Toronto, and Dr. O. D. Legge, Sudbury, are the guest clinicians.

A cordial invitation is extended to members of the profession and their wives to attend.

President—Dr. Ralph Foster
Vice President—Dr. V. S. Fournier
Secretary—Dr. R. A. Torrance

The annual convention of the Eastern Ontario Dental Association will be held at the Chateau Laurier Hotel, Ottawa, on September 11, 12, 13.

President—Dr. Aime Couture
Secretary—Dr. Paul Coté

CORRECTION

In the Editorial of our December issue reference was made to the Royal College of Surgeons of England. We are advised that there is no College of Dental Surgeons in England and that the title should read "Faculty of Dental Surgery, Royal College of Surgeons of England."

Editor: M. H. GARVIN, *Winnipeg*

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Editorial

OUR TENTH PROVINCE

Newfoundland under the terms of the British North America Act has become the tenth province of Canada. This island was once known as the senior Colony of Great Britain, being discovered by John Cabot in 1497. He raised the flag of England and persuaded King Henry VII to grant him a charter to carry out further explorations.

This is an interesting country. At one time vast herds of caribou roamed through the country side. This land is known as "The Land Where Cod is King," fishing being the chief industry although from the standpoint of revenue pulp and paper stands first.

One of the most remarkable of the physical features of the island is the immense number of lakes and ponds, which occupy nearly a third of the whole surface. Furthermore there are no finer salmon streams than those of Newfoundland.

The climate is more temperate than that of most portions of the neighbouring continent. It is but rarely and then only for a few hours, that the thermometer sinks below zero in winter, while the summer range rarely exceeds 80° Fahr. and for the most part does not rise above 70°. Tornadoes are unknown and thunderstorms are very rare.

In 1944 a medical survey of Nutrition in Newfoundland was made by prominent British, United States and Canadian medical men in response to recommendation made to the Government of Newfoundland by the Nutrition Council of the Newfoundland Medical Association. Two-thirds of the

population of this country is descended from rugged fishermen of Devonshire and the Channel islands; the other third being of no less rugged Irish stock and yet in spite of this the survey results showed that a very large proportion of the population was found with abnormalities which have come to be regarded as marks or signs of malnutrition due to poor fertility of the land, lack of adequate transportation and extensive poverty together with food habits which are distinctly bad.

The report further shows that the total food supply in Newfoundland provides per capita less than a third of the amounts recommended of vitamin A and ascorbic acid, less than half the calcium and riboflavin, and less than two-thirds of the thiamine.

Of course Newfoundland is not the only place where such deficiencies are found. Deficiencies of a somewhat comparable nature have been found in portions of the population of several cities throughout Canada by surveys conducted under the auspices of the Canadian Council on Nutrition in 1939. In one Canadian city, nearly one among every four persons consumed a diet which contained less than 60% of the recommended allowances for calcium and vitamin A, while the average intake of thiamine was less than half the standard. Data pointing to similar dietary inadequacy were obtained in samplings of the population of the United States in 1930 and 1937 by the United States Department of Agriculture, according to Russell M. Wilder, M.D. of the Mayo Clinic, Rochester.

Be all this as it may Newfoundland is now a province of Canada and is one of us and speaking for the dentists of the nine provinces we warmly welcome the dentists of Newfoundland into our Canadian professional life and trust that very soon the Newfoundland profession may be legally incorporated into the Canadian Dental Association with the hope and expectation that they may make real contributions to the dental program of Canada and that we who for so long have been an integral part of this great country may be able to help in some small way at least our dental brethren in Newfoundland.

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

1 The appointment of Lieut.-Colonel Wilfred E. Addinell of Edmonton, to be Officer Commanding No. 3 Company R.C.D.C. (Reserve Force), Edmonton, Alta., has recently been announced by Headquarters, Western Command.

Lieut.-Colonel Addinell was born in Ulleskelf, England, but has lived in Canada since early youth. He served with the Canadian Engineers in World War 1914-1918 in Canada and Overseas. Following graduation in dentistry from the University of Toronto in 1926, he practised in Ponoka, Alta., until 1939. Appointed to the General List, Canadian Army Dental Corps in September, 1937, he was transferred to the Canadian Army (Active) September, 1939; proceeded overseas in February, 1940; was promoted to Major, January, 1942; served in United Kingdom and Central Mediterranean Area, and returned to Canada in September, 1944.

Lieut.-Colonel Addinell holds the appoi ment of District Supervising Dentist, Depa of ment of Veteran Affairs, at Edmonton. he

2 *Canadian Officers' Training Corps—University Contingents*

Officer Cadets who are enrolled in schools of dentistry across Canada will commence their summer training in May. All summer training previous to the Junior year in dentistry is taken at the Royal Canadian School of Infantry. The final summer training period consists of a course of four weeks' duration at The Royal Canadian Dental Corps School followed by indentureship in an R.C.D.C. clinic. The R.C.D.C. phase of training provides indoctrination of the cadet into the service aspects of dentistry, the organization of the corps, etc., and finally provides the practical experience of working with the R.C.D.C. under service conditions. It is anticipated that future appointments to The Royal Canadian Dental Corps will normally be through the C.O.T.C.

The number of officer cadets undertaking training this summer is divided as follows:

	R.C.S. of I.	*R.C.D.C. School*
Dalhousie University	7	4
McGill University	7	1
University of Montreal	3	3
University of Toronto	14	13
University of Alberta	11	4
Total each school	42	25
Total both schools		67

3 The Royal Canadian Dental Corps School is endeavouring to compile the complete issue of the Journal of the American Dental Association from 1925 to 1944 inclusive.

Contributions would be greatly appreciated and should be sent C.O.D. to:

Officer Commanding,
No. 1 Central Dental Stores,
No. 26 Central Ordnance Depot,
Plouffe Park,
OTTAWA, Ont.

CANADIAN DENTAL ASSOCIATION NEWS

Greetings To Newfoundland

To Registrar Newfoundland Dental Association:

"Greetings to dental profession of Newfoundland on this historic day. Trust our professional relations may be closer through today's event."

Don W. Gullett, Secretary
Canadian Dental Association.

To Secretary Canadian Dental Association:

"Dental Profession of Newfoundland appreciates very much your kind telegram on the occasion of the union of this country with Canada and hopes that through you they may be helped and advised in any and all problems relating to dentistry in the tenth province with personal regards to yourself."

E. P. Kavanagh
Acting Registrar,
Newfoundland Dental Association.

Washington — Voluntary Health Insurance Bill

A new health measure designed to provide federal subsidization of voluntary health insurance programs in the various states has been introduced at Washington. The bill is described as a substitute for the compulsory health insurance bill before Congress and endorsed by President Truman. The bill provides that the federal government and the states would share the premium costs of those who are unable to pay. Such individuals would be issued service cards entitling them to the same type and quality of services provided regular subscribers. It is anticipated that this bill will be supported by professional organizations which are opposed to compulsory health insurance.

Recognition For C.D.A.

In a recent radio address entitled "Voluntary Agencies a Credit to Canada" by The Honourable Paul Martin, the Canadian Dental Association was listed as one of the national organizations working in support of official agencies in the national sphere.

Statistical Data Re Dental Personnel in Canada

Statistical data respecting dental personnel in Canada is presented in the following tables.

By comparison with similar information published last year it will be found that there are 52 fewer dentists. The loss is accounted for

by the fact that the Toronto school had no graduating class in 1948. The increase in population and slight loss in personnel has changed the ratio of dentists to population to some extent. The greatest change in this respect has occurred in Ontario, in which province the ratio in 1948 was one to 2,062 and in 1949 is one to 2,166.

Loss by death and retirement over the past four years has averaged 100. The average number of graduates from Canadian dental schools during the next four years will be approximately 250. The number of dentists in Canada should increase at the rate of approximately 150 a year on the basis of these averages. By the year 1953 there is reason to expect the number to reach 5,000 or more. It is anticipated that the largest increases will occur in the years 1950 and 1951.

Table VI has been added this year to the summary. This table indicates the number of dentists employed under federal authority who are practising in a province other than where licensed. Preceding the war there were none in this category.

TABLE I

STATISTICAL DATA RE DENTAL PERSONNEL IN CANADA

(as reported by Provincial Registrars)

As of January 3rd, 1949

Province	No. of Dentists Reported During Year of 1948							Total Increase or Decrease 1938	Ratio Total No. of Dentists per Capita Population
	Male	Female	Totals	Deaths	Retirements	Removals	Additions		
Prince Edward Is.	29	0	29	0	1	0	2	—1	1/3207
Nova Scotia	177	1	178	5	3	2	5	+9	1/3567
New Brunswick	112	0	112	1	1	0	4	+2	1/4491
Quebec	1058	5	1063	10	23	0	47	+189	1/3567
Ontario	1960	24	1984	17	24	15	20	+52	1/2166
Manitoba	244	1	245	1	3	6	5	—6	1/3089
Saskatchewan	192	3	195	2	0	4	8	—15	1/4379
Alberta	268	1	269	3	3	4	12	+33	1/3145
British Columbia	470	4	474	5	2	5	17	+112	1/2283
Totals	4510	39	4549	44	60	36	120	+375	1/2832

Population figures used in this table are those issued by the Federal Bureau of Statistics for the year 1948. Figures for increase or decrease as compared to the pre-war year 1938 are given for comparative purposes.

TABLE II

MOVEMENT OF CANADIAN DENTISTS DURING 1948

From: To:—	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Gt. Br.	U.S.A.	Australia
Prince Edward Is.	0	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	1	0	1	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	1	0	0	4	2	5	3
Manitoba	0	0	0	0	2	0	0	1	3	0	0	0
Saskatchewan	0	0	0	0	1	1	0	0	0	0	2	0
Alberta	0	0	0	0	2	0	0	0	2	0	0	0
British Columbia	0	0	0	0	0	0	0	0	0	0	5	0

TABLE III

NUMBER PRACTISING SPECIALTIES, BY PROVINCES

(Only those practising the specialty designated full-time enumerated)

	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
Dental Oral Surgeons (Exodontists)	0	1	0	3	25	3	0	1	2	35
Orthodontists	0	1	0	13	24	2	0	2	4	46
Periodontists	0	0	0	2	13	1	0	2	4	22
Pedodontists	0	0	0	0	2	0	0	0	2	4
Totals	0	2	0	18	64	6	0	5	12	107

TABLE IV

NUMBER EMPLOYED IN HEALTH SERVICES BY PROVINCES

	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
Dental Schools: (Teaching Staff)										
Full-time	0	2	0	8	8	0	0	0	0	18
Half-time	0	0	0	16	6	0	0	3	0	25
Hospital Service:										
Full-time	0	0	0	0	19	0	2	3	1	25
Half-time	0	0	0	0	4	0	0	0	0	4
School Dental Service:										
Full-time	0	2	1	8	18	1	0	5	6	41
Half-time	0	2	2	0	34	3	2	1	0	44
Public Health Service:										
Full-time	0	0	1	8	6	1	2	2	0	20
Half-time	0	0	0	6	0	0	0	0	0	6

TABLE V

TOTAL NUMBER
EMPLOYED BY FEDERAL DEPARTMENTS

As of January 3rd, 1949

Department of Veterans Affairs	52
Department of National Defence	64
Department of National Health & Welfare	7
Total	123

TABLE VI

NUMBER REGISTERED IN PROVINCE
AND SERVING OUTSIDE PROVINCE
(R.C.D.C., D.V.A., Etc.)

Prince Edward Island	1
Nova Scotia	10
New Brunswick	3
Quebec	10
Ontario	13
Manitoba	1
Saskatchewan	3
Alberta	2
British Columbia	2
Total	45

NEWS FROM THE PROVINCES

NOVA SCOTIA

C.D.A. President and Secretary visit Nova Scotia

Dr. H. J. Merkeley, President, and Dr. Don W. Gullett, Secretary of the Canadian Dental Association were honoured guests at a reception and dinner held in the Nova Scotian Hotel, Halifax, N.S., on April 20, 1949.

Held under the auspices of the Nova Scotia Dental Association, the function was well attended by members from all sections of the Province. Dr. Ross Harrington of Bridgewater, President of the N.S.D.A. was Chairman for the evening and extended a warm welcome to the guests of honour, the members of the R.C.D.C. and members of the N.S.D.A.

Three Past Presidents of the C.D.A., Dr. A. W. Faulkner, Dr. W. W. Woodbury and Dr. V. D. Crowe were present.

Dr. Merkeley spoke briefly on the C.D.A., outlining its policy, accomplishments and aims. Dr. Gullett gave a graphic description of the Nationalization of Dentistry in England. Both speakers stressed the fact, that should any such

Meeting of Prime Minister St. Laurent and Dean Hamilton when the former visited the Dental Clinic at the University of Alberta.

scheme be instigated in Canada, it would receive the full support of the C.D.A. only if Public Health were its purpose rather than a mere Treatment Service.

At the close of the evening, Dean J. S. Bagnall of Dalhousie University tendered both speakers the very sincere thanks of each member of the N.S.D.A. for bringing to them these vital and timely messages.

ALBERTA

University Appointments

The Board of Governors of the University of Alberta have recently announced the following appointments:

Dr. H. R. MacLean—Executive Administrator of the Department of Operative Dentistry.

Dr. R. A. Rooney—Executive Administrator of the Department of Prosthetic Dentistry.

Dr. J. W. Neilson—Executive Administrator of the Department of Periodontia and Orthodontia.

Dr. W. S. Hamilton—Executive Administrator of the Department of Oral Surgery.

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The Edmonton and District Dental Society

The final meeting of this Society was held on May 3, at the MacDonald Hotel at 6:30 p.m. This was the last meeting under the old executive and there was a very large attendance. The speaker of the evening was Dr. W. S. Hamilton, Dean of the Faculty of Dentistry of the University of Alberta. His subject was "Surgical Correction of the Prognathus Mandible." The subject was well illustrated by pictures of cases showing before and after the operation and diagrams showing the method of procedure.

The nominating committee of this society submitted the following slate of officers which were elected for the coming year:

President ..... H. N. Knight
Vice-President ..... R. A. McEwen
Secretary ..... R. B. Cameron
Treasurer ..... W. A. McIver
Social Convener ..... W. R. B. Wilson
Directors.....D. R. McIntyre, W. M. Orobko, G. E. Decker (Automatic)

The first Golf Meet of the summer will be held at the Mayfair Golf and Country Club on May 12. After the afternoon's play, dinner will be served at the Club House and later on Col. Hancock, late of the R.C.M.P., who has recently returned from the Orient, will speak to the members on the topic "Glimpses of the Orient."

•

University of Alberta News

On Wednesday, April 15, Prime Minister St. Laurent visited the dental clinic, following an address delivered to the staff and student body at Convocation Hall at the University. The Prime Minister was surprised at the completeness of facilities for the education of dental students.

Drs. H. R. MacLean and W. A. Quigley of the staff of the Dental Faculty of the University of Alberta are attending the Western Canada Dental Association in Saskatoon where each will present a group clinic.

Medicine Hat Dental Society

The McGrane Study Group, headed by Dr. Harold Knight, of Edmonton, and composed of Drs. Hodgson, Lloyd, Scott and their patient, visited the Medicine Hat Dental Society on March 10. The presented a highly instructive clinic outlining the various steps involved in denture construction using the McGrane technique.

The clinic was held in Dr. G. Ross Gibson's office on Friday afternoon and evening. Each step from the primary impression to the completed denture was demonstrated in detail and a question period concluded the clinic.

The Medicine Hat and District Society found this clinic extremely interesting and instructive. They commended the Edmonton Group for their unselfishness in taking time from their offices without recompense and at personal inconvenience, in order to carry their ideas to the dental societies of Southern Alberta. The technique was found to be most practical for the general practitioner and keen interest in this type of work was stimulated. Those in attendance were from Medicine Hat, Drs. G. Ross Gibson, G. D. Morrison, Milton Moore, A. E. Slack, E. A. Slack, J. L. Wyatt; from Maple Creek, Saskatchewan, Drs. Stewart and Kenny; from Brooks, Alberta, Drs. W. Robinson and Sawyer; and Dr. Dowler, of Empress, Alberta.

MANITOBA

Interceptive Orthodontics

The Dental Bureau of the Provincial Department of Health with assistance from the W. K. Kellogg Foundation conducted a study of interceptive orthodontics on April 21 and 22 by Dr. R. R. McIntyre of Calgary. In order that this phase of preventive dentistry was fully understood by those attending, the groups were kept to a limited attendance. Dr. McIntyre gave his presentation seven times to a total of 78 dentists of Manitoba. One group met at Neepawa and the remainder met in Winnipeg. Dr. McIntyre stressed the need to know occlusion and growth patterns in order to intercept malocclusion which may develop. It was pointed out that the profession has too often been unaware of irregularities until they were developed. Dr. McIntyre urged the general practitioner to study occlusion in children of 4 and 5 years of age paying particular attention to the interference of cuspids. Other orthodontic procedures which should be carried out by dentists caring for children were illustrated and explained. Dr. McIntyre's presentation was profusely illustrated with casts and presented with the enthusiasm necessary to make such instruction of value. Many favourable comments were received by those who were able to attend the meeting.

W. G. CAMPBELL

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Winnipeg Dental Nurses' and Assistants' Association

At the March 14 meeting of this Association the guest speaker was Mrs. Gordon Youngson, of the Junior League Project who spoke on cancer. At the April 11 meeting each member had her blood typed by a representative of the St. John Ambulance Association. Also a paper was given by Mrs. R. H. Murdoch on the Minneapolis convention.

At the annual meeting of this Association held May 9 Miss Ethel Brown assisted by Miss Louise Murchison and Miss Jean Cuthill, held a candle light service for the installation of the new Executive, 1949-1950.

President ..... Miss Kay Hoffard
Vice-President ..... Miss Mary Davidson
Recording Secretary...Miss Margaret Kitching
Treasurer ..... Miss Irene Russell
Membership ..... Miss Jane McClure
Program ..... Mrs. Ronnie Davis
Corresponding Secretary.....Miss Ethel Olson
Sick and Visiting.....Miss Louise Murchison
Social ..... Miss Gwen Mills
Editorial ..... Mrs. F. Jeffrey

Miss Kay Hoffard, Miss Margaret Kitching and Miss Mary McArthur were elected as delegates to the Western Canada Dental Convention, at Saskatoon, Sask., in June.

F. JEFFREY

ONTARIO

Faculty of Dentistry University of Toronto

Northern Ontario Meetings

Dr. F. T. Pearson, Department of Operative Dentistry, gave lectures to the following Dental Societies during May: North Temiskaming Dental Society, at Timmins; South Temiskaming Dental Society, at Kirkland Lake; North Bay Dental Society, at North Bay; Sudbury Dental Society, at Sudbury; Sault Ste. Marie Dental Society, at Sault Ste. Marie;

Thunder Bay Dental Association, at Port Arthur.

Distinguished Visitors to the Faculty

Among the recent visitors to the Department of Periodontology were Frank E. Beube, D. D. S., (Toronto, 1930) who is Associate Clinical Professor of Dentistry, School of Dental and Oral Surgery of the Faculty of Medicine, Columbia University and W. Henson Jones, M.A., D.D.S., Assistant Professor of Operative Dentistry and Periodontology, School of Dentistry, University of Buffalo.

C.D.A. Convention, 1950

The Council of the Faculty of Dentistry has issued an invitation to the Committee planning the Annual Convention in 1950, to include in their program a half-day clinical "At Home" in the Dental Building. The 75th Anniversary of the founding of the dental school under the auspices of the Royal College of Dental Surgeons of Ontario will be celebrated in 1950, and it was thought that an excellent opportunity presents itself to welcome the members of the profession back to the dental building.

•

Ladies' Auxiliary to Academy of Dentistry, Toronto

The annual luncheon of this Society was held at the Royal York Hotel on April 28, 1949, with Mrs. A. F. Cooper presiding. Dr. E. A. White, President of the Academy, brought greetings and Mr. Robert Foster was guest soloist.

On behalf of the auxiliary Mrs. Harold Skilling presented Mrs. A. F. Cooper with a bouquet of spring flowers on her retirement as President. The newly elected President is Mrs. W. W. Philp, and the officers for 1949-50 are as follows:

1st Vice-President ..... Mrs. F. H. Shepherd
2nd Vice-President ..... Mrs. R. G. Ellis
Recording Secretary ..... Mrs. J. E. Verth
Corr. Secretary ..... Mrs. K. M. McPherson
Treasurer ..... Mrs. W. L. McMachen
Councillors.....Mrs. J. D. Barnet, Mrs. J. G. Glascott, Mrs. J. H. Johnson, Mrs. H. H. Milburn, Mrs. C. I. Treadwell, Mrs. E. A. White.

Katherine Treadwell
Press Convener

•

Thunder Bay Dental Society

The annual dinner and business meeting of this society was held on April 9. During the meeting attended by dentists practising throughout the district a toast to the sister professions was proposed by Dr. J. Stewart Ritchie and responded to by Dr. F. Dennis on behalf of medicine, G. B. Weiler, for law, and Mr. L. Emory, for engineering. Dr. F. A. Blatchford replied to a toast to the Royal College of Dental Surgeons of Ontario, proposed by Dr. M. Keenan, Port Arthur.

The following officers were elected for the ensuing year: President, Dr. G. D. McKeown, Fort William; Vice-President, Dr. W. C. McComb, Port Arthur; Secretary-Treasurer, Dr. C. J. Egan, Fort William.

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Physicians Services Incorporated

At the annual meeting of the Physicians' Services Incorporated, it was reported that, after only 10 months' operation, more than 25,000 Ontario citizens are members of this prepaid medical care plan. Participating in the plan now are 2,400 of the province's 4,200 doctors; in Toronto 700 of the city's 1,100 physicians have joined the plan. The 25,000 subscribers' enrolment represents 300 employee groups in the province.

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Toronto Study Club of Dental Technicians

This club held its annual dinner and election meeting on April 13 at the Royal York Hotel. The speaker of the evening Dr. C. J. Ringle of Williams Gold Refining Co., was introduced by Mr. Charles Mellish. The subject of Dr. Ringle's discussion was "Surveying, Designing and Engineering of Partial Dentures." This is not the first time that the club has had a visit from Dr. Ringle and he will be welcome again at any time to share his wealth of knowledge in dental materials.

Officers for 1949 - 50

President ..... C. K. Mellish
Vice-President ..... S. Furrie
Secretary ..... C. Goodhall
Recording Secretary ..... W. P. Dykes
Treasurer ..... J. Washbrook

Executive Board

K. Beattie, R. Nash, R. Mitchell, C. Watters, H. J. Tebbutt, B. McGuire, E. A. Avery, C. Blandford, W. P. Dykes.

Sergeant-at-Arms: G. Harwood

Honorary Members: C. L. Daly, D. Rollaston

C. Blandford

Public Health Luncheon
Ontario Dental Association Convention

Generally speaking dental practitioners do not attend dental public health functions with much zest. Many go pretending a sympathetic tolerance, remain for a time then quietly slip away. The Committee in full realization of this, scored a new approach at the Ontario Dental Association Convention by arranging a special luncheon. Everyone was invited to this luncheon, and ostensibly it was free because you paid for it with your Convention fee so naturally there was a real good attendance.

A special part of the luncheon was in the menu provided—here it is, study it carefully.

Tomato Juice
Beef—minimum 4 oz. cooked lean meat
Potato, Baked
Carrots
Peas
Salad—Cabbage, Lettuce, Carrots, Tomato, French Dressing
Rolls—Whole Wheat (2)
Oleo-margarine (Monarch with Vitamin D) ½ oz.
Cheese—Black Diamond, ½ oz.
Stoned Wheat Thins
Coffee—Clear
Iodized Salt
Whole Milk, 8 oz. (served ice cold)

			Day's Requirement
Calories	Total	1020	2400—3000
	22% Protein	55 grams	70 grams
	41% Fat	46 "	.....
	37% Carbohydrate	96 "	.....
Calcium		0.5 "	1.0 grams
Phosphorus		0.8 "	1.5 grams
Iron		8.0 mgm.	12 mgm.
Vitamin A		4600 I.U.	5000 I.U.
Thiamin		0.9 mgm.	1.2 mgm.
Riboflavin		1.2 "	1.8 "
Ascorbic Acid		78 "	75 "
Vitamin D		160 I.U	. . . .

Even to the casual observer it will be noted there is *no sugar* or *sweet dessert,* and so the dentists were forced to practise how best to prevent the incidence of caries — dietary control. When it was generally realized that the Committee had really scored an object lesson in Nutrition, considerable good natured fun pervaded the whole meeting emphasizing the impression made.

The luncheon speaker, Dr. Byron Hughes of Ann Arbor, Michigan, had a different sort of Public Dental Health message too. He talked about children, their Mothers and Dads and the Dentist.

The speaker suggested it was the duty and responsibility of every dentist to represent the profession of which he is a part in giving the child an understanding and appreciation of dental health. The strength of education is dependent upon the effectiveness with which it has been transmitted to the child and so the children should be given a comprehensive knowledge of dental care and its beneficial application to themselves. The child then should leave the dental office with both education and treatment.

As a matter of public relations Dr. Hughes emphasized that the dentist should not be represented as one who produces a painful service but rather as a professional person who is friendly and contributes to the health, welfare and happiness of his patients. The speaker mentioned that too often newspapers and comic strips in an attempt to be humorous present a very harmful influence among children by creating wrong impressions.

A conception of dental care as something that hurts, develops insecurity in the child who needs dental attention and consequently he fears to consult the dentist. The tragic result is dental disease and poor teeth which develop further insecurity and an inferiority complex as the child grows older.

The speaker pointed out that a security psychology is something that Mother and Dad begin to develop in their child in early infancy by each contributing habitual affection, care and training. In this way the child grows in basic security and has much less tendency to develop harmful habits or attitudes. For example it was stated that babies with this basic security do much less finger sucking than those who lack it and similarly other undesirable habits are less frequently practised.

It is the responsibility of the dentist then to appreciate the value of basic security in the child and present dentistry to him as something more than a restorative service that causes pain. It is a service conducive to the individual's health, welfare, happiness and good appearance often appreciated by him most when golden opportunities have been lost.

Dr. Frederick Tisdall Stricken

The sudden death of Dr. Fred Tisdall was a great shock to his many personal friends and to those in both medical and dental science who knew him through his work in the field of nutrition.

Dr. Tisdall was a contagious enthusiast, a devoted and arduous worker, and a recognized leader in the practical promotion of better health through improved nutrition. He had a delightful personality with a winning smile, he poured out his energy freely to help others; and as Dr. Sydney Smith said of him, "He

was a generous colleague, a loyal friend, a lover of his fellowmen and a fine citizen."

Dr. Tisdall's ability and work was recognized in many ways. His Majesty the King conferred on him the O.B.E. for distinguished services with the R.C.A.F., during the second Great War. He was a fellow of both the London and the Canadian College of Physicians. He was Chairman of the Nutritional Committees of both the Canadian Medical Association and the Canadian Red Cross Society and a member of the food and nutrition Board of the National Research Council at Washington, D.C. He was Assistant Professor of Pediatrics, University of Toronto and director of laboratories and research at the Hospital for Sick Children to which organization he was greatly devoted.

Dr. Tisdall's passing brings a sense of great loss to nutritional research and education. His many contributions to the scientific literature however will continue to live and inspire both those who knew him and future generations of students to take up the work where he left it and go on. Thus his memory will be perpetuated by his benefactions.

EMPIRE NEWS

The Present Position of the School Dental Service

by P. J. Pretty, L.D.S. Eng., S. D. Bradley, L.D.S. Eng., and K. G. Hyland, L.D.S. Brist.

Condensed from Br. D. Jour. April 1, 1949

As has been seen, the dental officer is leaving the School Dental Service for the General Dental Service because he can earn at least two or three times the salary there. The L.C.C. has lost over 30 per cent of its officers within two months. In the counties of Leicestershire, Derbyshire and Nottinghamshire there are now over forty vacancies. The great majority of local authorities have for a long while now been receiving no replies at all to advertisements for dental officers. Not only are the staffs not being augmented to meet the new and greater responsibilities now resting on local authorities, but resignations are taking place with alarming speed. This involves the loss of the large sums of public money spent in building up the existing service. The service developed to a high degree of efficiency by great toil and perseverance is now melting away.

The tide of dental disease, especially during the years of childhood and adolescence, can only be held back by unceasing vigilance. There are now great gaps in the breakwater and it is tragic to reflect that it will take a mere two or three years for the dental condition of the children to slip back to the condition of appalling dental sepsis of forty years ago.

The acute shortage of dentists foreseen by the Teviot Committee is now a fact. With the incidence of the National Health Service the existing body of practitioners is pressed beyond measure and the queues are getting longer as patients wait their turn to receive treatment. The private practitioner cannot hope to give complete treatment to the children as well—seven millions of them. Cases of children whose parents either elect to receive private treatment, or none at all, are being referred almost daily for urgent treatment to the School Dental Service by private practitioners. Moreover many of the latter confess frankly that they possess neither the inclination nor the desire to undertake the treatment of school children.

Those dental officers who still remain at their posts are doing so for the following reasons:

(a) They believe deeply that the school dental service as an entity is the best instrument yet devised for the securing and maintaining the dental health of the child.

(b) They have adopted the service as a life-work believing that by so doing they are directing their energies and their professional ability into the most worth-while channel for the benefit of the community.

(c) They cannot believe that a service such as they have the honour to serve can be allowed to lapse so easily.

They were prepared to stay in the service as long as it was possible. It has become no longer possible. Many of them have suffered financial hardship for many years, and the fact that the standard recognized as just remuneration is not being applied in their cases has decided them that it is useless to wait any longer.

We therefore submit that for the sake of

the coming generations of children urgent thought and action are needed before the position becomes altogether irretrievable.

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Cost of Eye Care

In terms of purchasing power, the per patient cost of eye care—including professional fee and eyeglasses — is approximately 60 per cent higher in Great Britain under its national health service program than in the United States, Walter A. Stewart, president, American Optical Company, said April 26 in his address at the annual shareholders' meeting.

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Fellowship for Freedom

The second general meeting of the Fellowship for Freedom in Medicine was held at Caxton Hall, Westminster, on February 19. Lord Horder presided over a gathering of about 500 and said that the membership was 2,200—in London 580, and 1,620 in the provinces. The Fellowship had made no general appeal for members, but had been recruited by personal contacts, and the result was not unsatisfactory.

The meeting discussed a memorandum of association in which the objects of the Fellowship were set out. The first three were as follows: (a) To insist upon the preservation of the highest standards of medical practice. (b) To protect the public and the medical profession from State monopoly in medicine. (c) To preserve the ethical and professional freedom of the individual doctor in the service of his patients and to maintain the status of the general practitioner, including his financial security. Other objects were to oppose encroachments of the State, to define the limits of State medicine, and to support and protect the character, status, and interest of the medical profession generally.

The first question of policy and action which was brought forward was whether the Fellowship should press for the repeal or, alternatively, the drastic amendment of the Act. The meeting decided by a very large majority to press for drastic amendment rather than repeal, and then turned to consider in what respects revision of the structure of the Act should be sought. The meeting agreed without discussion that the Fellowship should strive for the limitation of the Minister's powers of appointment; the exemption of teaching institutions from the control of the Minister was also agreed to as a line of policy.—*From Supplement the Br. Med. Jour., Feb.* 26, 1949.

GENERAL NEWS

Voluntary Health Insurance Bill Introduced in U.S.A. Congress as Substitute for Compulsory Program Proposed by Truman

A new health measure designed to provide federal subsidization of voluntary health insurance programs in the various states was introduced in the Senate early in April by a bipartisan group of five senators headed by Senator Hill. Sen. Hill described the new bill as a substitute for the compulsory health insurance system proposed in the Murray-Wagner-Dingell bill and endorsed by President Truman. The new measure is based on the same principle as the Hill-Burton Act of 1944 which provides federal aid to the state and communities for the construction of hospitals. The basic idea of the new bill is to encourage individuals to join medical and hospital insurance programs. The bill provides that the federal government and the states would share the premium costs of those who are unable to pay. Such individuals would be issued service cards entitling them to the same type and quality of hospital and medical services provided regular subscribers, according to Sen. Hill. While the bill is devoted primarily to medical and hospital care, there is no reason why dental care could not be included in local insurance plans, Sen. Hill told representatives of the A.D.A. Since basic control of the insurance programs would rest with the local organizations, such a decision would be up to the state and local communities, he said. The Hill bill is expected to be supported by the American Medical Association which has been advocating extension of voluntary health insurance programs as a counter-measure to compulsory health insurance.

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Compulsory Health Insurance

The Journal of the American Dental Association declared that President Truman's espousal of federal compulsory health insurance

"represents a dangerous willingness to experiment with the health of the people for the sake of political advantage."

In a special 96-page supplement devoted entirely to a discussion of the issues involved in compulsory health insurance, the dental publication flatly charged that adoption of the Truman program would not be in the public interest.

"It (compulsory health insurance) is not a product of those who have had life-long experience in the actual provision of dental and medical care," the Journal said editorially. "It is a program designed by laymen with a sharp eye on the political profit inherent in promising something for nothing.

"The traditional common sense of the average American makes all panaceas suspect. Cumpulsory health insurance at the federal level should be recognized for what it is, a panacea that can mask the dangerous symptoms of real health needs until the present effective American mechanism for maintaining health will not be able to respond to the increasing calls for public service which every profession finds always before it."

As a practical approach toward a solution of the nation's dental health problems, the Journal cited the program of the American Dental Association calling for increased research, expanded dental health education and the extension of community health programs to make dental care available for all children.

Dr. Clyde E. Minges, of Rocky Mount, N.C., A.D.A. president and one of the contributors to the special supplement, declared:

"This program (of the American Dental Association) obviously will not be as dramatic and attractive as a program which promises something for nothing. But it is a program which can be carried out now without unending expenditures, without burdensome taxes, without creating a huge, new administrative structure, without sacrificing future dental health for present political advantage."

Dr. Allen O. Gruebbel, secretary of the Council on Dental Health, pointed out that the dental profession's objection to the Truman program is based on scientific rather than political grounds.

"In spite of all that has been written and said about the need for a more effective health plan, the improvement of health service and its extension to more persons are not the chief cause of conflict between the opposing groups," Dr. Gruebbel said. "The health professions always have led in furthering these aims.

"The basic issues are: (1) the interference of a third party in the health affairs between a citizen and his physician or dentist and (2) the universal socialization of the health services. There is no more justification for requiring physicians, dentists and nurses to serve under a national socialized system than there is for requiring attorneys, bankers or business executives to do so."

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Compulsory Health Insurance in Sweden

Sweden is taking strides toward socializing its medicine. A compusory health insurance program will start next year. Parliament, dominated by Socialists, is to consider an over-all medical plan. Under that, virtually every doctor could become a public employee in 10 years or so. Many Swedish doctors object that Sweden cannot afford the program and that it will bring other disadvantages. Proponents admit the project is costly, but contend the medical care it will offer will be far superior to any now existing.

As evidence that socialization of medicine already is fairly advanced in Sweden, authorities note that only 13 of 651 hospitals of all kinds are private enterprises. The others are managed by provincial governments or city councils, and financed from local and state taxation. Poor patients are cared for free of charge — through community relief or state appropriations. Others pay part of the cost. Operations are free. Most specialists are attached to hospitals as public employees. Hospital doctors in executive positions usually continue their private practice. While they have no right to charge for their services to official bed patients at the hospital it is customary for patients in private rooms to pay extra. A patient may choose his own doctor, but must pay charges above those on the official list. The state will pay for hospitalization. (The additional cost of a private room will be carried by the patient.) Certain medicines will be free, others may be had at half price.

Because of the shortage of medical personnel, lack of building material, and the

present financial status of the country, the plans may not be realized for 10 or 20 years, perhaps longer.

•

The British Commonwealth Medical Conference

The British Commonwealth Medical Conference owes its being to a general desire for a closer linking between the various medical associations of the Commonwealth, both those within the British Medical Association and those with which it is affiliated. So far there has been little more than the exchange of Journals between Associations; correspondence between secretaries; and occasional visits at annual meetings of delegates or unofficially appointed representatives.

Accordingly, on the call of the British Medical Association, a group of delegates (many of whom were attending the World Medical Association meeting at the time) met at British Medical Association House last September and began the planning which has now eventuated in the Commonwealth Conference, the first meeting of which is to be held in Saskatoon in June, 1949.

The Conference is especially designed for growth of inter-Dominion professional relationships. In actual practice it is planned to be informal in nature, while always performing its valuable function as a liaison body. It will lay down no special policies, but will serve rather as a clearing house for the problems which confront the profession of medicine in different parts of the Commonwealth. The Conference itself will take no action, but will stimulate the individual national associations to do so.

The initial meeting will be held in Saskatoon June 6 to 9. The chairman of the meeting will be our President-elect, Dr. J. F. C. Anderson, and some of the topics to be discussed will be: medical economics, with each country contributing an account of its own problems; medical education, again with a discussion of the problems of each country; the place of various anciliary health associations in detail; and other subjects as they may present themselves.

This meeting will bring together representatives from the following countries; Australia, Ceylon, Great Britain, India, New Zealand, Pakistan. Possibly South Africa and Southern Rhodesia will also send a delegate.—*From Editorial in Can. Med. Assoc. Jour., Apr.* 1949.

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The Multiple Sclerosis Society of Canada

An organization known as the Multiple Sclerosis Society of Canada, under Dominion Charter, has recently been formed to: (1) Stimulate and support research on multiple sclerosis (and allied diseases), and create a fund therefor by public and private contributions. (2) Educate the public on the social problems of multiple sclerosis. (3) Act as a clearing house for information on this disease. (4) Assist in collecting statistics.

The initial and immediate financial objective of the Society is the raising of $200,000 by public subscription, for purposes of research.—Can. Med. Assoc. Jour., Apr. 1949.

•

U.S. Plans New Income Survey of Dental Profession

In April, The National Income Division of the U.S. Department of Commerce will mail questionnaires to more than 25,000 dentists throughout the nation asking for their voluntary co-operation in a survey designed to provide basic information about the practice of dentistry, the gross income of dentists, office costs and expenses and net income and salaries. The survey, which has been endorsed by the A.D.A. Board of Trustees, will cover the years 1943 to 1948, and will be similar to the last national survey of the Department of Commerce. It is also expected to provide information which will permit comparisons of the income trends in the dental profession with those in medical, legal and other professions.

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Postgraduate Instruction by Telephone

Seventy dental societies in 30 states with a total membership of more than 13,000 already have indicated an interest in participating in the postgraduate telephone extension course on "Current Advances in Dentistry" which will be sponsored this fall by the University of Illinois College of Dentistry.

The course of six round table discussions and symposia is designed to serve as monthly programs for interested dental societies. Programs have been scheduled for October and November of this year, and for the first four months of 1950.

The faculty for the series will be assembled from all parts of the U.S., and will consist of dental specialists of wide reputation. The course is expected to be exceptionally advantageous to dental groups in rural areas and small communities which usually do not have an opportunity to hear outstanding men.

The series will be fed by the American Telephone and Telegraph Company to dental organizations from coast to coast. The American Telephone and Telegraph Company has guaranteed clear and uninterrupted transmission of the two-hour programs.

Dr. Paul Levy, chairman of the postgraduate extension program for the University, said that the enthusiastic response by the dental societies will make it possible to offer the entire course of six panels for a fee of $10 per individual taking the course, regardless of the distance of his home from Chicago.

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Dr. Brauer Receives New Appointment

Dr. John C. Brauer, director of postgraduate dental education in the Univ. of Washington School of Dentistry, Seattle, has been appointed Dean of the Univ. of Southern California School of Dentistry.

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Saskatoon Convention of Dental Nurses' and Assistants'

This Convention is to be a meeting of the Canadian Dental Nurses' and Assistants' Association in conjunction with the Western Canada Dental Nurses' and Assistants' Association and not just a meeting of the western group as has been advertised.

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Caries Prophylaxis

by Irwin D. Mandel, D.D.S.

Summary of paper in N.Y. Jour. of D. May 1949.

Based on evidence to date, the procedures available for caries prophylaxis are:

1. Correction of local retentive factors and replacement of early carious lesions with fillings.
2. Carbohydrate restriction, especially hard, large particles type and free sugar.
3. Topical application 2 per cent sodium fluoride on children up to the age of 15, provided it is economically practical.
4. Vitamin D supplementation (to be recommended for children, although its value in dental caries is incompletely established).
5. Oral hygiene instruction with emphasis on brushing immediately after each meal and use of dental floss (on theoretical grounds).
6. Ammonia-urea dentifrice as a supplement to oral hygiene (still experimental but probably useful).

Data on vitamin K, penicillin and metal impregnation are still too incomplete to warrant their recommendation.

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Compulsory Health Insurance in the Netherlands

The Netherlands has found that a compulsory health insurance law cannot make dental treatment available to all of its citizens, according to Dr. Charles F. L. Nord, an Amsterdam dentist and president of the Federation Dentaire Internationale.

In the May issue of the Journal of the American Dental Association, Dr. Nord pointed out a major weakness in a plan very similar to the one now being proposed by President Truman. He said: "Actually, of course, full dental treatment for everyone is out of the question. Not only would it require more than six times the number of dentists now in practice, but it would cost so much that no government could afford it."

Because of this situation, Dr. Nord says the dental profession has persuaded Dutch authorities to work toward a solution of the problem along other lines.

IN MEMORIAM

Myles A. Deagle of Winnipeg, Manitoba, aged 43, died January 11. He was graduated from the Faculty of Dentistry, University of Toronto and commenced practice in Manitoba in 1928.

He was a member of the Manitoba Dental Association and the Winnipeg Dental Society. He was also a member of the Knights of Columbus and the Alcrest Golf Club.

Dr. Deagle is survived by his widow and one son.

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William Garard of Toronto, Ontario, aged 39, died in Wellesley Hospital, April 11, following an accidental fall from the Prince Edward Viaduct, a drop of 175 feet.

Le Journal
DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 JUIN, 1949 NO 6

Les Soins Dentaires Aux Enfants Canadiens*

par l'hon. PAUL MARTIN, ministre de la Santé nationale et du Bien-être social

1. Une Journee d'Hygiene Dentaire pour les Enfants a Ottawa

C'est d'abord auprès des enfants que l'on devrait commencer à faire de l'hygiène dentaire. On s'est trop peu préoccupé, dans le passé, d'enrayer la carie dentaire chez les enfants, et l'on s'est trop peu soucié de leur montrer comment prendre soin de leurs dents. C'est de la prévention—et il faut entendre par là une prévention *précoce*—et de la recherche que nous devons attendre les plus grands progrès en hygiène dentaire. Nous avons droit d'espérer que, dans cette marche vers le progrès, les dentistes canadiens indiqueront la voie à suivre.

En organisant cette Journée d'hygiène dentaire pour les enfants, la *Dental Society* et le *Dental Public Health Committee* d'Ottawa posent un magnifique acte de civisme, auquel participent *l'Ottawa Superfluity Shop* ainsi que ces hommes et ces femmes dévoués au bien public qui apportent leur concours à cette nouvelle initiative de la Société. C'est un honneur pour moi que de porter la parole au cours de ce déjeuner. Il me semble que je me trouve ainsi à participer à une entreprise qui aidera à susciter partout de l'intérêt pour ce domaine extrêmement important de l'hygiène infantile.

Le problème des affections dentaires en est un d'une très grande importance. En général, parmi la population, la carie des dents est la plus commune de toutes les affections. Un moyen judicieux de s'attaquer à ce problème, c'est de faire en sorte que tout le monde reçoive ce qu'il y a de mieux en fait de soins dentaires. Bien que nous connaissions l'importance de ce point, les trois quarts de nos citoyens n'en tiennent pas compte. C'est toujours la même histoire: "On en fait trop peu et on le fait trop tard," surtout en ce qui concerne les enfants canadiens. *Pourtant, c'est pendant la période de l'enfance qu'il faut gagner la partie de l'hygiène dentaire, si nous voulons devenir un peuple aux dents saines.*

Etant donné que l'hygiène dentaire est étroitement liée à l'hygiène générale, les membres de votre profession doivent regarder comme important tout progrès sanitaire nouveau. Je voudrais vous entretenir spécialement des progrès que le Programme national d'hygiène a aidé à réaliser dans le domaine de l'hygiène dentaire, programme qui met annuellement 30 millions de dollars, et plus, à la disposition des services d'hygiène provinciaux.

2. La Place de l'Art Dentaire dans le Programme National d'Hygiene

Je veux, aujourd'hui, vous indiquer sommairement quelques-uns des moyens par lesquels le Programme national d'hygiène sert et servira au progrès des soins d'hygiène dentaire au Canada.

*Traduction d'une version abrégée d'une causerie prononcée au déjeuner de la Journée d'hygiène dentaire pour les enfants, à 1.30 hre de l'après-midi, lundi, le 14 mars 1949, au Chateau Laurier, Ottawa.

a) On établit l'état du problème dentaire

Les enquêtes sur l'hygiène, qui se poursuivent actuellement dans chaque province, nous en diront davantage sur l'importance du problème dentaire au Canada, sur la manière dont nos services dentaires sont répartis et s'ils sont suffisants. Je suis sûr que l'on tient pleinement compte, au cours de ces enquêtes, des besoins d'une dentisterie d'hygiène publique plus importante. Il est nécessaire de bien savoir où nous en sommes si nous voulons dresser et organiser de meilleurs programmes d'hygiène dentaire. Il est intéressant de souligner que dans deux provinces au moins: la Nouvelle-Ecosse et la Saskatchewan, ces enquêtes sur l'hygiène tiennent compte des besoins dentaires des enfants des régions rurales.

b) On forme des dentistes

A l'heure actuelle, parmi les dentistes canadiens, il n'y en a pas plus d'une douzaine qui ont reçu une formation professionnelle en hygiène publique. Mais la subvention aux fins de formation professionnelle permet de grossir l'offre de personnel dentaire convenablement formé. Par exemple, deux dentistes d'Ontario et un du Nouveau-Brunswick suivent un cours de dix mois en hygiène publique dentaire. Ils sont du nombre des 537 hygiènistes dont la formation a déjà été approuvée en vertu du Programme national d'hygiène. Il n'y a pas de doute que, à mesure que les subventions fédérales donneront de nouvelles occasions de servir dans le champ de la dentisterie d'hygiène publique, il y aura un plus grand nombre de membres de votre profession qui seront attirés dans cet important domaine du service public.

Il est évident que le Canada n'a pas assez de dentistes. La proportion d'un dentiste environ par 3,000 personnes est si basse que la demande dépasserait de beaucoup les moyens de la profession, si les gens qui devraient se faire soigner les dents se présentaient en plus grand nombre. En plus de former plus de dentistes et de fournir, pour les aider, des hygiénistes dentaires compétents, nous devons compter sur la dentisterie préventive pour mieux venir à bout du problème dentaire. La mauvaise répartition des dentistes vient encore aggraver le problème. Plus de 40 pour cent des dentistes canadiens sont établis dans Ontario et près de la moitié d'entre eux exercent leur profession dans le Grand Toronto. Dans les autres provinces, il y a une sérieuse pénurie de dentistes. En Saskatchewan, par exemple, il n'y en a que 192, soit un environ par 4,500 de population, et même dans ce cas, plus de la moitié d'entre eux sont concentrés dans six centres. Les subventions fédérales, en augmentant le nombre des dentistes qui se consacreront à l'hygiène publique, peuvent remédier en partie à cette mauvaise répartition qui existe d'une province à l'autre, et des régions rurales aux centres urbains.

c) La recherche en hygiène publique dentaire

Il est impossible de trouver une solution durable au problème de la carie dentaire, si l'on n'en apprend pas d'avantage sur ses causes et si l'on ne perfectionne pas les méthodes de prophylaxie. La recherche est donc d'une importance fondamentale. La subvention fédérale pour fins de recherche en hygiène publique fournit un montant de $100,000, qui sera porté à $500,000 dans l'avenir, pour défrayer la recherche en hygiène, recherche qui atteint déjà, au Canada, un niveau sans précédent.

Tout récemment, la Faculté d'art dentaire de l'Université de Toronto a entrepris, à l'aide des fonds provenant de cette subvention, une étude scientifique des effets de l'application de fluorure de sodium aux dents des enfants. On a déjà des preuves que cette application aux dents des enfants pendant un certain nombre d'années réduit souvent, d'une façon sensible, le degré de la carie dentaire. L'enquête qui se poursuit auprès de 8,000 écoliers de la Colombie-Britannique dans le but de déterminer la valeur d'une méthode simplifiée, destinée à recueillir les données sur la santé et le bien-être de chaque enfant, offre également un intérêt particulier dans le domaine des soins à donner aux dents des enfants. Au cours d'une enquête sur la morbidité qui se poursuit dans une lo-

calité canadienne et typique, aux environs de Toronto, on prend note des soins dentaires que requièrent les personnes de tout âge.

Outre ces projets, le ministère de la Santé nationale et du Bien-être social, par le truchement de ses divisions de l'hygiène dentaire et des recherches, étudie, depuis trois ans et demi, l'effet de la présence du fluor dans l'eau des aqueducs sur la fréquence de la carie dentaire. Travaillent au succès de ce projet, en étroite coopération avec nous, le ministère ontarien de la Santé, les autorités sanitaires de la ville de Brantford, où l'on est en train de faire une enquête auprès de 1,800 enfants, ainsi que les autorités sanitaires des villes de Stratford et de Sarnia, où l'on a constitué des groupes pour faire la contre-épreuve de l'expérience de Brantford. Les fonctionnaires de la Division de l'hygiène dentaire rapportent que, bien que la preuve ne soit pas encore concluante, *il y a des indices qui nous engagent à entretenir quelque optimisme sur la valeur de la fluorination de l'eau comme remède partiel à la carie dentaire.*

Les résultats définitifs de cette enquête et de celle qui a été entreprise récemment à l'Université de Toronto, au sujet du fluorure de sodium peuvent aider grandement à accroître nos moyens de combattre la carie dentaire. Toutefois, il faudrait bien comprendre que de telles mesures ne peuvent remplacer d'aucune façon les services d'hygiène dentaire que l'on doit fournir aux enfants en temps opportun. On espère plutôt que ces résultats seront de nature complémentaire, c'est-à-dire qu'ils aideront à réduire le nombre effarant de défauts dentaires, que l'on rencontre actuellement chez les enfants d'âge scolaire.

d) Progrès de l'hygiène dentaire publique

La subvention fédérale d'hygiène publique générale, qui s'élève, cette année, à $4,395,000, prévoit aussi une expansion considérable de la prophylaxie dentaire. Ainsi, au cours des derniers mois, on a travaillé à l'organisation de divisions de l'hygiène dentaire dans les ministères provinciaux de la Santé au Nouveau-Brunswick, en Saskatchewan et en Colombie-Britannique. On projette, dans deux autres provinces, l'établissement de divisions semblables. Ces initiatives permettront d'organiser plus vigoureusement des programmes d'hygiène dentaire préventive dans toutes les provinces, programmes qui, il va sans dire, insisteront sur la prophylaxie dentaire chez les enfants. En Colombie-Britannique, grâce à la subvention fédérale d'hygiène publique, on est en train de mettre sur pied un programme provincial d'hygiène dentaire préventive, d'outiller deux nouveaux dispensaires dentaires pour le plus grand Vancouver et d'en remplir les cadres. L'installation d'un dispensaire dentaire aux environs de St-Jean rentre dans le programme d'éducation et d'hygiène dentaire préventive du Nouveau-Brunswick.

Une initiative particulièrement remarquable, qui a été prise grâce à cette subvention, c'est l'expansion du service dentaire pour les enfants d'âge préscolaire dans les régions rurales de la Saskatchewan. On installe six dispensaires dentaires complètement équipés dans les hôpitaux et les autres centres médicaux des régions rurales. Des unités dentaires, dont quatre fixes et sept mobiles, toutes dotées d'un outillage complet, fonctionneront dans les différentes unités sanitaires et donneront des meilleurs services dentaires aux enfants d'âge préscolaire, au nombre de 40,000 et plus. L'une des unités mobiles utilisera le fluorure de sodium dans son travail de prophylaxie. Les enfants préscolaires de Saskatoon jouiront aussi d'un meilleur service dentaire, par suite de la nomination d'un second dentiste et de l'achat d'un équipement de rayons-X. On ne peut pas surestimer la valeur de tous ces projets, destinés à donner de meilleurs soins dentaires aux enfants de la Saskatchewan.

e) Les soins dentaires aux enfants infirmes

La subvention fédérale destinée à prévenir les causes d'infirmité chez les enfants et à aider à fournir des facilités de diagnostic et de traitement, assure aux provinces un montant annuel de $500,000. Je suis sûr que la dentisterie préventive, surtout en ce qui regarde les in-

firmités et l'enlaidissement qui résultent d'une mauvaise dentition, se rangera parmi les nombreuses initiatives qui découleront de cette subvention.

f) Le dépistage du cancer

Les autres subventions du Programme national d'hygiène ont moins de rapports, en apparence, avec l'amélioration de l'hygiène dentaire, mais chaque subvention, ou presque, a quelque chose à faire avec la prophylaxie et les soins dentaires. La subvention pour la lutte anticancéreuse, par exemple, servira à intensifier toutes les offensives canadiennes contre ce fléau. Le dentiste a un rôle important à jouer dans la lutte anticancéreuse, parce qu'il peut se rendre de mieux en mieux compte des symptômes précoces du cancer dans la bouche ou aux environs, lieux où près d'un dixième des cas de cancer trouvent leur source.

g) Les soins dentaires aux malades des hôpitaux

Une partie de la subvention pour la lutte antituberculeuse a déjà servi à des projets dentaires. Il n'est que raisonnable que l'on ne néglige pas les soins d'hygiène dentaire chez les malades que l'on soigne pour la tuberculose ou pour toute autre affection. Dans la province de Québec, trois sanatoriums achètent de l'outillage pour leurs dispensaires dentaires. Le Sanatorium radiographique de l'Alberta central se pourvoit d'un matériel de radiographie dentaire et l'on fournit du matériel dentaire à un sanatorium du Nouveau-Brunswick.

La subvention d'hygiène mentale peut aussi permettre aux provinces de mieux aménager les dispensaires dentaires des hôpitaux pour maladies mentales afin de répondre aux besoins du service dentaire de ces institutions. Par exemple, en Alberta, en vertu de la subvention fédérale, l'école provinciale de formation pour les débiles mentaux est dotée d'un matériel dentaire.

h) Aide fédérale aux nouveaux hôpitaux

L'aide prévue pour l'accroissement des facilités d'hospitalisation au Canada forme une partie importante du Programme national d'hygiène. En plaçant un montant annuel de 13 millions de dollars à la disposition des provinces, la subvention pour la construction d'hôpitaux est de nature à encourager beaucoup cette construction. De nouveaux hôpitaux ou des agrandissements aux hôpitaux actuels, d'une capacité de 6,400 lits, ont déjà obtenu le droit de recevoir de l'aide fédérale et, au cours des prochaines semaines, un plus grand nombre encore de projets seront mis à l'étude. La construction de nouveaux hôpitaux et de nouveaux postes infirmiers devrait attirer des médecins, des dentistes et d'autres hygiénistes dans des régions jusqu'ici mal pourvues en fait de soins hospitaliers, médicaux et dentaires, et ainsi aider grandement à remédier à la mauvaise répartition, au Canada, des services d'hygiène et des hygiénistes.

i) L'aide fédérale à l'initiation à l'hygiène dentaire

En plus des importantes initiatives que j'ai soulignées et qui ne forment, en somme, que les premières étapes d'un programme progressif d'hygiène dentaire préventive, le plan fédéral d'hygiène de 30 millions de dollars encouragera l'initiation à l'hygiène, surtout dans les écoles, ce qui devrait aider à mieux faire comprendre ce qu'est une bonne hygiène dentaire. En poursuivant plus énergiquement l'éducation et la recherche en hygiène dentaire et en apportant plus d'attention à la dentisterie préventive, spécialement auprès des jeunes enfants, nous avons raison d'espérer que le problème de la carie dentaire sera, pour la génération qui lève, de moins en moins inquiétant.

3. Le Progress de la Prophylaxie Dentaire

L'origine de la profession de dentiste ne remonte guère à plus d'un siècle. Par la force des choses, cette profession s'est surtout attachée, pendant les premières périodes de son développement, à soigner ou à remplacer les dents gâtées. Mais, plus près de nous, et à mesure que la science faisait des progrès, la dentisterie s'est efforcée d'avantage non seulement de combattre les affections dentaires, mais aussi de nous apprendre à les prévenir. En dressant le programme de

cette Journée de l'hygiène dentaire des enfants, la *Dental Society* d'Ottawa s'acquitte de deux devoirs importants: en premier lieu, elle oriente les membres de sa profession; en second lieu, elle saisit l'opinion publique des notions élémentaires d'hygiène dentaire.

Qu'il faille attirer l'attention sur les problèmes dentaires des enfants d'Ottawa, une enquête faite l'an dernier sur l'état des dents de quelque 7,000 enfants de cette ville, âgés de quatre à dix ans, le démontre amplement. De ce nombre, 86 pour cent avaient des dents défectueuses, et chaque enfant avait, en moyenne, près de cinq cavités dentaires. Fait encore plus étonnant. 43 pour cent de ces enfants ont déclaré que leurs dents n'avaient jamais été traitées auparavant.

Les dentistes de cette ville étudient aujourd'hui les découvertes scientifiques et les techniques les plus récentes de la prophylaxie dentaire, spécialement dans leur application aux enfants. Toute la journée, il y a des réunions et des démonstrations publiques dans le but de faire mieux comprendre à la population l'importance du rapport qu'il y a entre l'hygiène dentaire et la santé générale de l'enfant, et la nécessité impérieuse de donner aux dents des enfants, avant qu'il ne soit trop tard, tous les soins requis.

Comme titulaire du ministère fédéral qui s'intéresse spécialement à tous les efforts qui se font pour conserver et promouvoir la santé et le bien-être de la population canadienne, je suis convaincu qu'une collectivité saine doit être, tout d'abord, une collectivité bien informée. Au milieu de tous les efforts que l'on fait pour améliorer la santé, l'éducation sanitaire s'impose.

La Division d'hygiène dentaire de mon Ministère se sert de brochures, d'affiches et d'étalages pour promouvoir l'éducation sanitaire. Elle fait tout en son possible pour indiquer aux gens comment prévenir les affections dentaires. C'est elle qui a préparé les premiers films et les premières projections fixes d'origine entièrement canadienne sur l'hygiène dentaire. Afin d'intéresser davantage les dentistes à la dentisterie infantile, cette Division commandite de rapides cours de perfectionnement qui sont donnés sous la direction d'un éminent spécialiste en dentisterie infantile. Les efforts de ce spécialiste ont été si bien couronnés de succès que, de toutes les parties du Canada, l'on réclame ses services.

A venir jusqu'à quelques années, il n'existait pas de mesures pratiques de prophylaxie dentaire susceptibles d'application générale. Aujourd'hui, après de longues années d'efforts attentifs, ardus et souvent décevants, la recherche dentaire semble enfin approcher du but qu'elle s'est fixé. L'art dentaire envahit le domaine de la prophylaxie à un moment où il est de plus en plus démontré qu'il est vraiment possible de combattre la carie dentaire.

C'est donc aujourd'hui la Journée de l'hygiène dentaire des enfants. Cette initiative révèle la perspicacité de la *Dental Society* et du *Dental Public Health Committee* d'Ottawa. Elle est, j'en suis sûr, un symbole de la mentalité progressive des d e n t i s t e s canadiens. Maintenant que, grâce au Programme national d'hygiène, vos efforts sont mieux secondés; que la recherche révèle les secrets des affections dentaires; que la prophylaxie dentaire peut épargner ces affections à tant de jeunes Canadiens, c'est la génération dont l'hygiène dentaire vous est confiée qui jugera de votre succès ou de votre échec.

Dans le Monde Dentaire

Bienvenue à la province de Terre-Neuve.

A l'occasion de l'entrée de Terre-Neuve dans la Confédération canadienne, le secrétaire de l'A.D.C. a adressé au régistraire de l'Association Dentaire de Terre-Neuve le message suivant: "Bienvenue aux membres de la profession dentaire de Terre-Neuve, en ce jour historique. Veuillez croire que nos rapports professionnels deviendront plus étroits à l'occasion de l'évènement de ce jour."

En réponse, le docteur E. P. Kavanagh, régistraire-en-exercice de l'Association Dentaire de Terre-Neuve, a transmis les mots suivants:

"La profession dentaire de Terre-Neuve apprécie beaucoup votre télégramme sympathique à l'occasion de l'union de ce pays au Canada et elle espère que, par vous, elle sera aidée et conseillée dans tout et tous les problèmes de la dixième province, se rapportant à la dentisterie. Meilleurs saluts personnels."

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Visite du Président et du Secrétaire de l'A.D.C., aux Trois-Rivières.

Le docteur H. J. Merkeley, de Winnipeg, président de l'Association Dentaire Canadienne et le docteur Don W. Gullett, secrétaire, ont rendu visite aux dentistes des Trois-Rivières et des environs, mercredi, le 27 avril. Ces deux visiteurs distingués ont entretenu les quelques cinquante dentistes réunis à cette occasion des divers aspects, que présente le projet fédéral d'assurance-santé pour la population canadienne.

Les docteurs F.-X. Lacoursière et Conrad Godin, respectivement président et aviseur de la Société Dentaire des Trois-Rivières, avaient organisé cette réception.

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Qualifications pour l'approbation d'une faculté dentaire.

Le Conseil d'Education Dentaire de l'A.D.C. vient de publier un exposé officiel des qualifications minima exigées pour l'approbation d'une Faculté dentaire, au Canada. Après une étude approfondie du sujet, le Conseil a présenté son rapport pour adoption à la réunion du Bureau des Gouverneurs, au mois de juin dernier; ce rapport, qui fut adopté à cette occasion, vient d'être publié sous forme de pamphlet et peut être obtenu, sur demande, aux quartiers-généraux de l'A.D.C., 211 rue Huron, Toronto.

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Témoignage à l'A.D.C.

Dans une causerie donnée récemment à la radio par l'Honorable Paul Martin, intitulée "Organisations libres, une valeur pour le Canada," ce ministre a cité l'Association Dentaire Canadienne comme étant une de ces organisations nationales travaillant au bien-être du pays.

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Résolution de l'Association Dentaire du Manitoba.

Le secrétaire de l'Association Dentaire du Manitoba vient de soumettre la résolution suivante, qui a été approuvée à l'unanimité, sans opposition, à l'assemblée annuelle de cette association tenue le 1er décembre dernier:

> "Reconnaissant la grande importance du travail de l'Association Dentaire Canadienne et réalisant le besoin urgent de support pécuniaire plus élevé, l'Association Dentaire du Manitoba contribuera $10.00, par tête à l'A.C.D. pour 1948 et $25.00 à partir de 1949."

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Rapport sur l'éducation et le licenciement des dentistes de la Grande-Bretagne.

A une réunion du Conseil de l'Education Dentaire, tenu à Montréal, en avril 1948, le secrétaire de l'A.D.C. avait été prié d'enquêter sur l'éducation dentaire donnée en Angleterre, durant son voyage en Grande-Bretagne. Comme conséquence, à une réunion de ce comité tenue récemment à Montréal, le secrétaire a présenté un rapport sur l'éducation et le licenciement des dentistes, dans ce pays. On peut obtenir une copie de ce rapport en s'adressant à 211 rue Huron, Toronto.

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Publication de la liste des membres de l'A.D.C.

En réponse à plusieurs demandes, un bottin contenant les noms et adresses de tous les membres de l'Association Dentaire Canadienne sera publiée en décembre 1949. Le coût considérable d'une telle publication a forcé le Comité Exécutif à prendre la décision de ne pas en publier en 1948.

Projet de loi d'assurance-santé facultatif, à Washington.

Une nouvelle mesure d'assurance-santé, s'opposant à celle présentée par le Président Truman, vient d'être inscrite à l'agenda du Congrès américain. Cette nouvelle proposition enlève l'obligation qu'aurait tout citoyen d'adhérer au plan d'assurance-santé, comme le veut le premier projet. Cette nouvelle loi paierait les primes d'assurances à des organismes privés, comme la Croix-Bleue, pour les pauvres, qui ne peuvent faire ces déboursés. Ce bill propose que le gouvernement fédéral et les gouvernements de chaque état divisent le coût des primes de cette assurance pour ceux, qui ne peuvent pas payer. Ces citoyens seraient munis d'une carte, qui les rendraient éligibles au même genre et à la même qualité de services médicaux donnés aux abonnés réguliers. Il est à croire que ce nouveau bill sera supporté par les organisations professionnelles, qui sont opposées à l'assurance-santé obligatoire.

Rectification.

Dans les livraisons de janvier et février 1949, apparaissait dans la section française un article de notre distingué confrère Marcel Papailler, d'Haiti, intitulé "Les Névralgies du Trijumeau". A la suite du nom de ce collaborateur, les titres "D.D.S." et "L.C.D." apparaissaient au début de cette communication. L'auteur nous fait remarquer qu'il ne possède pas ces titres et qu'il est simplement diplômé de l'Ecole Dentaire d'Haiti.

Nécrologies.

A Montréal, jeudi, le 7 avril, est décédé *le docteur Louis-Charles LeSage,* à l'âge de 57 ans. Originaire de Lévis, il vivait dans la métropole depuis 1914. Son père était le docteur Charles LeSage, ancien député de Dorchester, à Ottawa.

Il avait reçu son doctorat en chirurgie dentaire, en 1919, de l'Université Laval de Montréal. Durant plusieurs années, il avait été directeur de la Société Dentaire de Montréal.

Il laisse son épouse, née Gabrielle Naud et deux fils, le docteur Bernard LeSage et Guy LeSage, son frère, le docteur Albert LeSage, ancien doyen de la faculté de Médecine de l'Université de Montréal, et ses soeurs.

Les dentistes de la province de Québec offrent à la famille du disparu leurs sincères condoléances.

Le docteur Gaston Guillemette. A l'Hôtel-Dieu, à l'âge de cinquante-quatre ans, est décédé le docteur Gaston Guillemette, le 21 mars 1949.

Ancien élève du collège de Montréal, il avait reçu son doctorat en chirurgie dentaire de l'école dentaire de l'université Laval, en 1919.

Malade depuis plusieurs années, il laisse son épouse, née Claire Archambault.

Paul-E. Poitras.

CONSEILS PRATIQUES

Comment nettoyer les instruments diamantés souillés d'amalgame

D'après F. J. Loughlin, dans le Dental Digest, *il suffit de les laisser tremper pendant une nuit dans du mercure chimiquement pur. Placer le mandrin sur un cône de bois, comme s'il s'agissait d'une empreinte d'inlay, et retourner le tout au-dessus d'un flacon à large ouverture contenant le mercure.*

Un procédé pour polissage rapide

G. A. Wilson, dans le Dental Record *(1949) indique un bon procédé de polissage rapide qui donne un brillant parfait à l'or comme à la porcelaine et au caoutchouc, c'est l'oxyde de zinc appliqué sur la surface à polir avec un disque de cuir ou de caoutchouc.*

Pour préserver le tranchant des fraises

Il vaut mieux éviter de faire bouillir les fraises, si l'on en croit A. W. Bark, dans le Dental Record, *car l'ébullition les émousse. Il est préférable de les nettoyer simplement par le brossage à l'eau et au savon, de les tremper ensuite dans l'eau bouillante et de les placer enfin dans un récipient contenant de l'alcool. On réalise ainsi une stérilisation qui est certainement suffisante "puisque c'est de cette manière qu'on stérilise les instruments devant servir à des opérations autrement délicates sur les yeux."*

Archives de Stomatologie, no 4, 1948

(Médecine et Hygiène, 15 novembre 1948)

Chiffres statistiques au sujet des dentistes du Canada

Les tableaux suivants montrent des chiffres statistiques au sujet des dentistes canadiens. En comparant ces chiffres avec ceux de l'an dernier, on notera une diminution de 52 dentistes. Cette perte est expliquée par le fait que l'Université de Toronto n'avait pas de diplômés en 1948. L'accroissement de la population et la légère diminution du nombre des dentistes a changé la proportion des dentistes en rapport avec le nombre des habitants. Le changement le plus considérable s'est produit en Ontario dans ce domaine, puisque, en 1948, la proportion était d'un dentiste par 2062 habitants, tandis qu'en 1949 elle est de 2166.

La perte subie par la mort et les retraites, au cours des quatre dernières années, s'est chiffrée en moyenne à 100. La moyenne des diplômés dans les Ecoles canadiennes, au cours des prochaines quatre années, sera de 250, environ. Le nombre des dentistes du Canada devrait augmenter au rhythme de 150, par année, en se basant sur ces moyennes. En 1953, le nombre total des dentistes du Canada devrait toucher 5,000 ou plus. Il est à croire que les augmentations les plus considérables se produiront durant 1950 et 1951.

Un nouveau tableau a été ajouté, cette année. Il représente le nombre de dentistes à l'emploi du gouvernement fédéral, qui travaillent dans une autre province que celle, où ils ont été licenciés. Avant la guerre, il n'y avait pas de telle situation.

TABLEAU I

STATISTIQUES SUR LE NOMBRE DE DENTISTES DU CANADA

(rapportées par les régistraires provinciaux, au 3 janvier 1949)

Nombre de dentistes rapporté durant l'année 1948								Augmentation ou dim. totale	Proportion du nombre total des dentistes
Province	Hom.	Fem.	Total	Morts	Retraites	Déménagements	Augmentations	1938	en rapport avec la population
Ile-du-Pr. Ed.....	29	0	29	0	1	0	2	—1	1/3207
N.-E.....	177	1	178	5	3	2	5	+9	1/3567
N.-B.....	122	0	122	1	1	0	4	+2	1/4491
Qué.....	1058	5	1063	10	23	0	47	+189	1/3567
Ont.....	1960	24	1984	17	24	15	20	+52	1/2166
Man.....	244	1	245	1	3	6	5	—6	1/3089
Sask.....	192	3	195	2	0	4	8	—15	1/4379
Alberta....	268	1	269	3	3	4	12	+33	1/3145
C.B.....	470	4	474	5	2	5	17	+112	1/2283

Les chiffres des populations cités dans ce tableau sont ceux fournis par le Bureau Fédéral de la Statistique pour l'année 1948.

Les chiffres d'accroissement ou de décroissement en rapport avec l'année d'avant-guerre, 1938, sont indiqués dans un but de comparaison.

TABLEAU 2

MIGRATION DES DENTISTES DURANT 1948

De: A:—	I. du Pr.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.B.	G.-B.	E.-U.	Australie
I. du Pr.-Ed.	0	0	0	0	0	0	0	0	0	0	0	0
Nouve.-Ecosse	0	0	1	0	1	0	0	0	0	0	0	0
Nouv.-Bruns	0	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	1	0	0	4	2	5	3
Manitoba	0	0	0	0	2	0	0	1	3	0	0	0
Saskatchewan	0	0	0	0	1	1	0	0	0	0	2	0
Alberta	0	0	0	0	2	0	0	0	2	0	0	0
Colombie Britann.	0	0	0	0	0	0	0	0	0	0	5	0

TABLEAU 3

NOMBRE DE SPECIALISTES, PAR PROVINCES

(Seulement ceux, qui pratiquent exclusivement leur spécialité)

	I.-P.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.B.	Total
Chirurgie (exodontie)	0	1	0	3	25	3	0	1	2	35
Orthodontie	0	1	0	13	24	2	0	2	4	46
Périodontie	0	0	0	2	13	1	0	2	4	22
Pédodontie	0	0	0	0	2	0	0	0	2	4
Total	0	2	0	18	64	6	0	5	12	107

TABLEAU 4

NOMBRE DE DENTISTES EMPLOYES DANS DES SERVICES DE SANTE, PAR PROVINCES

	I.-P.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.B.	Total
Ecoles dentaires (enseignement)										
Plein-temps	0	2	0	8	8	0	0	0	0	18
Demi-temps	0	0	0	16	6	0	0	3	0	25
Service hospitalier:										
Plein-temps	0	0	0	0	19	0	2	3	1	25
Demi-temps	0	0	0	0	4	0	0	0	0	4
Service dentaire scolaire										
Plein-temps	0	2	1	8	18	1	0	5	6	41
Demi-temps	0	2	2	0	34	3	2	1	0	44
Service de santé publique										
Plein-temps	0	0	1	8	6	1	2	2	0	20
Demi-temps	0	0	0	6	0	0	0	0	0	6

TABLEAU 5

NOMBRE TOTAL DE DENTISTES EMPLOYES PAR LE GOUVERNEMENT FEDERAL

au 3 janvier 1949

Ministère des affaires des Vétérans	52
Ministère de la Défence Nationale	64
Ministère de la Santé nationale et du Bien-être social	7
Total	123

TABLEAU 6

NOMBRE DE DENTISTES ENREGISTRES DANS UNE PROVINCE ET PRATIQUANT DANS UNE AUTRE PROVINCE

(Corps Dentaire Royal Canadien, Affaires des Vétérans, etc.)

Ile-du-Prince-Edouard	1
Nouvelle-Ecosse	10
Nouveau-Brunswick	3
Québec	10
Ontario	13
Manitoba	1
Saskatchewan	3
Alberta	2
Colombie Britannique	2
Total	45

Etudiants en Chirurgie Dentaire, aux Etats-Unis

Un programme d'application de tests d'aptitude est actuellement en cours d'exécution dans les Ecoles Dentaires, aux Etats-Unis. Nous relevons quelques-unes des différentes données statistiques, qui ont été recueillies à cette occasion. 13% des élèves nouvellement inscrits sont fils de dentistes; 99% sont du sexe masculin; 44% sont mariés; 20% seulement sont bacheliers et 77% ne possèdent aucun diplôme (no college or university degree). L'âge moyen des élèves est de 25 ans.

J.A.D.D., tiré de L'INFORMATION DENTAIRE, XXX, no 47.

Visite du Président de l'A.D.C., aux Trois-Rivières

Photographie prise lors de la visite du Président et du Secrétaire de l'Association Dentaire Canadienne aux Trois-Rivières, dans le cours du mois d'avril 1949. De gauche à droite, nous voyons: le docteur Don W. Gullett, secrétaire de l'A.D.C., le docteur Conrad Godin, aviseur de la Société Dentaire des Trois-Rivières, le docteur J. H. Merkeley, président de l'A.D.C. et le docteur F.-X. Lacoursière, président de la Société Dentaire des Trois-Rivières.

PAGES EDITORIALES

COMITE DE REDACTION

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Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., F.I.C.D.

397 est Boul. S.-Joseph, Montréal

Rapport du Rédacteur de la Section Française du Journal de l'Association Dentaire Canadienne au Bureau des Gouverneurs de l'Association Dentaire Canadienne*

Encore une fois, je loue ce privilège d'être un dentiste canadien et de paraître devant ce bureau, constitué par des membres avertis et tellement au courant des exigences actuelles de notre profession.

Je considère aussi que c'est une faveur d'occuper le poste de rédacteur de la Section Française du Journal de l'Association Dentaire Canadienne; cette fonction fournit des occasions nombreuses de juger à son mérite le bon état d'esprit des dentistes de langue française de ce pays.

A peu près à la même époque, l'an dernier, notre rapport annuel déplorait le nombre restreint de pages mises à notre disposition pour publier tout le matériel, qui nous vient de l'Université de Montréal, des sociétés et de particuliers. Nous avons en mains un amoncellement d'articles intéressants traitant de sujets scientifiques, qu'il nous est impossible d'écouler, parce que nos douze pages mensuelles ne nous donnent pas assez d'espace, puisqu'il nous faut garder des colonnes pour les nouvelles d'intérêt général pour les dentistes du Canada.

Au rhythme d'un article par mois, nous sommes retenus d'avance pour une année. Nous espérons que les renseignements contenus dans ces articles ne seront pas désuets, quand ils seront publiés! Ce manque d'espace nous empêche d'améliorer l'état de notre section. Il nous plairait énormément de voir les rubriques suivantes prendre place dans nos pages:

1) Résumés d'articles d'autres revues.

Notre situation, en Amérique, nos relations suivies avec l'Europe nous permettraient d'étaler devant nos lecteurs des résumés de l'activité scienti-

*A la réunion tenue à Saskatoon, Sask., les 2, 3, 4, 5 juin 1949.

fique française du monde. Nous pratiquons l'échange avec au-delà de vingt périodiques de langue française et notre action est purement platonique, puisque nous ne pouvons reproduire des résumés ou des extraits de ces journaux.

2) Revue des livres

Certains auteurs et des maisons de publication française, belges et suisses nous font parvenir des volumes, qu'ils nous demandent d'analyser pour eux. Nous désirons instituer cette chronique pour le bénéfice de nos lecteurs, qui prendraient contact ainsi avec la production scientifique excellente de nos confrères d'autre continent. Faute d'espace, nous devons leur refuser ces renseignements.

3) Pages éditoriales

Nous sommes d'avis qu'un Editorial, par livraison, a sa place dans un Journal officiel, comme le nôtre. Il nous parait excellent que les dirigeants de notre Association guident les opinions des membres sur les problèmes de l'heure de notre profession. Nous avons songé, à plusieurs reprises, à demander des éditoriaux aux chefs de groupe et toujours, pour la même raison, nous avons remis à plus tard ces intentions.

Nous aimons vous faire part de notre seul réel problème: celui de notre manque d'espace. Depuis plus de quatorze ans, nous sommes limités à douze pages. Il est temps que notre section prenne plus d'envergure et de volume.

2—Nos relations avec les journaux dentaires de langue française du monde se développent d'année en année. Des remarques obligeantes sur le Journal de l'A.D.C. paraissent dans des revues étrangères. Quelques-uns de nos articles sont même reproduits, parfois "in extenso", dans ces périodiques. En constatant cet intérêt de l'Europe pour les choses dentaires canadiennes, nous nous demandons si notre Association fait tout en son pouvoir pour augmenter le nombre des abonnés dans ces pays amis. Nous ne pouvons, à cette heure, suggérer des moyens pratiques de réaliser cette expansion de notre Journal. Mais soyez assurés que le Journal de l'Association Dentaire Canadienne, étant le seul Journal rédigé en français en Amérique, peut se tailler une place considérable en Europe. Nous avons en mains une correspondance volumineuse pour illustrer ce fait; un grand nombre de dentistes européens nous apprécient déjà et veulent nous connaître d'avantage.

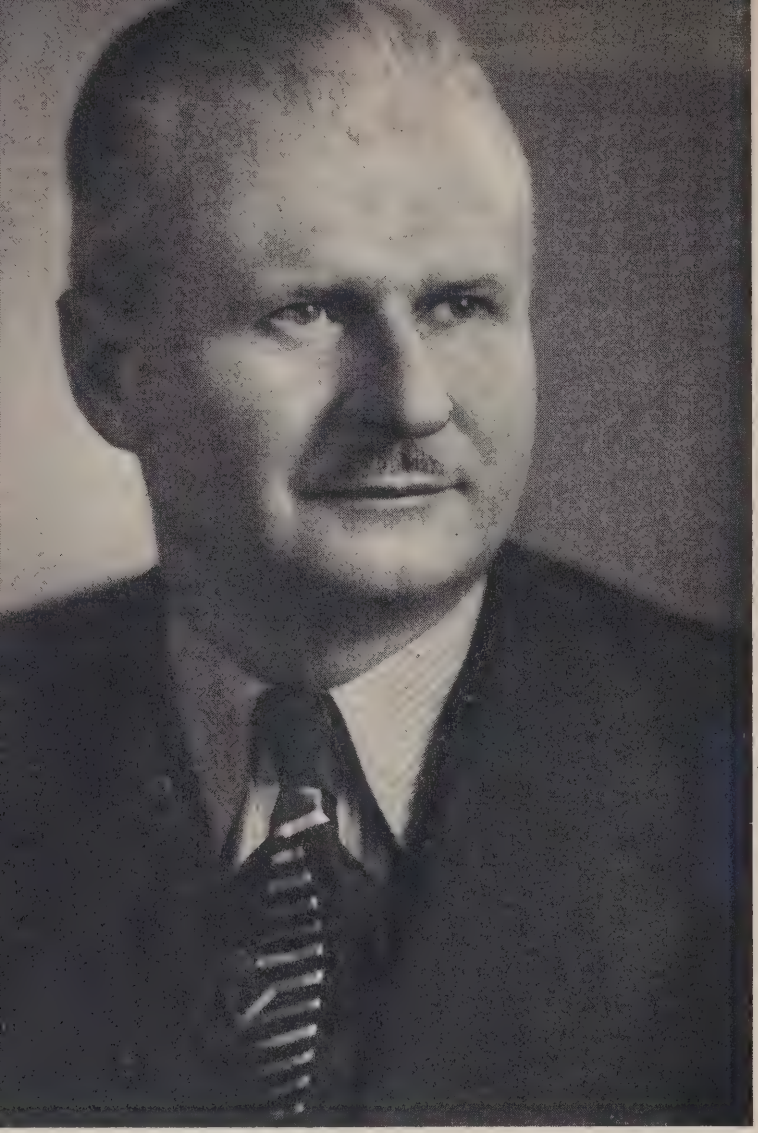
En terminant, laissez-moi exprimer ma vive gratitude au docteur Garvin, pour son appui et son encouragement indéfectibles; au gérant d'affaires, le docteur Gullett, mes remerciements pour son amabilité et à tous ceux, qui nous ont aidé dans notre besogne, notre vive reconnaissance.

GERARD DE MONTIGNY

Photo by Dr. J. S. Bricker, Vancouver,

Mount Robson (12982′) the Monarch of the Canadian Rockies, also Tom Berg Lake, Tumbling Glacier and Helmet Mountain.

"I took a minute as it passed and made it work with me,
I filled it full from first to last with such rich industry,
That though for years I've used its store,
For years to come there's plenty more."



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DR. L. M. GROSE

President of the Ontario Dental Association

Past President of the Academy of Dentistry, Toronto

The Journal OF THE CANADIAN DENTAL ASSOCIATION

VOL. 15 TORONTO, JULY, 1949 No. 7

THE TREATMENT OF ACUTE ORAL VINCENT'S INFECTION*

by W. J. LINGHORNE, D.D.S., Toronto, Ontario,
and D. F. STEDMAN, Ph.D., Ottawa, Ontario

VERY early in the war the Canadian Dental Corps found that necrotic gingivitis (trench mouth) was prevalent in the Armed Forces. The time lost through the necessary treatment and the high percentage of recurrence seriously interfered with training schedules, while the application of the various treatments also placed a very heavy load on the dental officers. From the point of view of the general health of the Service personnel this problem was the concern of both the medical and the dental branches. Accordingly a special unit was formed by the Canadian Dental Corps and the R.C.A.F. Medical Division at the Air Force Station, Trenton, the purpose of which was to investigate periodontal disease and its control in the Services.

This paper is confined to the management of the acute phase of necrotic gingivitis and introduces a new and powerful therapeutic agent for this purpose. It is not our intention to discuss the aetiology, signs and symptoms or histopathology of necrotic gingivitis as these aspects have been dealt with in other publications, e.g. the review of the whole subject by Box and Ham[1].

Many types of treatment and combinations of methods have been used in the treatment of the acute phase of necrotic gingivitis, such as intravenous or topical use of mapharsen; Churchill's iodine followed by silver nitrate; chromates; Fowler's solution; or covering the ulcerations with cement dressings. Recently penicillin has become available and may be used by injection or locally in the form of pastilles.

None of these treatments is entirely satisfactory. Some have deleterious effects on the teeth or require the manipulation of tender, acutely inflamed and ulcerated tissues. Recovery is very frequently slow and occasionally the case does not respond to one type of treatment and another has to be instituted. All have the disadvantage of being time consuming for both the dentist and the patient.

Recently penicillin has become available, and is moderately effective in combatting this condition. However this treatment also has some shortcomings, especially under service conditions. It may be used by injection, in which case the patient requires virtual if not actual hospitalization. Penicillin may also be used as pastilles, but these frequently have lost their potency during storage. Continuous treatment of the mouth is required, and recovery is none too rapid, and unless implemented by other treatment penicillin does not assist in removing debris, etc. from the pockets of infec-

*Assisted by a grant from the Associate Committee on Dental Research of the National Research Council of Canada.

tion as a preliminary to further corrective measures. Also there is the possibility of the development of penicillin resistant strains of organisms when penicillin is prescribed for necrotic gingivitis, which may have serious consequences to the patient later. It is clear therefore that an effective method of treatment of the acute phase, having no harmful sequelae and requiring less of the dentist's and patient's time, would be of great value. This is especially true in the services where necrotic gingivitis was so prevalent. The treatment here outlined consists of simply having the patient use a mouthwash four times daily until the acute symptoms have subsided. Further corrective measures should then be undertaken by the dentist.

Details of the Present Treatment

From clinical tests of a wide variety of medicaments a treatment was selected for further study, consisting essentially of the use of a pentavalent inorganic arsenate, and an oxidizing agent, used together. This combination was markedly superior to all others tested, and was also remarkably more effective than might be expected from results obtained by the use of either agent alone. A considerable number of variants of this general type were therefore tested during a long period of clinical trial, in order to secure the maximum benefit from such formulations.

Composition Of The Mouth Wash

Of the formulae tested, the most effective form finally standardized is:—

	(metric)
Potassium dihydrogen arsenate	.25 gm.
Sodium dihydrogen phosphate monohydrate	.20 gm.
Calcium dibenzoate	.50 gm.
Magnesium dibenzoate	.25 gm.
Loritol (cetyl polyglycol ether)	.015 gm.

For use these solid ingredients are dispensed as needed:—

3¼ oz. of 3% U.S.P. hydrogen peroxide is diluted with ¾ oz. of water, the solids added, and dissolved as quickly as feasible, either by stirring or shaking.

In another form of this formula the above solids are combined with 8 gm. of urea peroxide. This form is dispensed simply by the addition of 114 cc. (4 oz.) of water.

Urea peroxide when dissolved in water gives the required amount of hydrogen peroxide, and the urea itself has a well known value in necrotic wounds.

Pharmacology Of This Treatment

This treatment is of interest from the pharmacological point of view in that a number of points in this formula required close attention before the arsenate could be used for this purpose.

Arsenic

The arsenic in Fowler's solution and the usual inorganic arsenic salts are trivalent. If this form of arsenic comes in contact with any tissue protein it becomes strongly attached through some of the essential sulphur groups, and two results are therefore produced:—

1. Trivalent inorganic arsenic moves through tissue very slowly.
2. The protein is damaged, and such trivalent arsenic is therefore very toxic.

In this formula, however, the arsenic is in the pentavalent form, and in this form does not become attached to the sulphur of proteins, in fact pentavalent arsenic has but little affinity for sulphur, as shown for example by the fact that in the usual analytical scheme fairly strong acid and heat are necessary for the precipitation of pentavalent arsenic as sulphide. Arsenates therefore are not hindered in passing through tissue, and they also penetrate readily through the debris which usually fills infected pockets. It therefore reaches the pathogenic organisms readily, and its effectiveness in Vincent's infection shows clearly that this arsenic compound is lethal to the organisms concerned, since the formula

is quite ineffective if the arsenate is omitted.

Arsenic toxicity

Adequate data on the toxicity of arsenates is not available in the literature, and consequently an extensive series of tests were made feeding this arsenic compound to animals. It was found to be five or six times less toxic, on the basis of its arsenic content, than is ordinary trivalent arsenic. From these tests, which will be published in detail elsewhere, it was estimated that one prescription, 4 oz., of the solution, could be taken by an average adult *daily* for long periods before trouble developed, and that for a large quantity taken at one time, it would require about four prescriptions (16 oz.) taken together to reach the $L.D_{50}$, the average lethal dose. Furthermore if as little as a teaspoonful of the complete mouth wash is swallowed, its peroxide content causes vomiting without other ill effect.

It was further found in this study that the type of body damage caused by the pentavalent arsenates is much less serious than is caused by the trivalent arsenites, in that animals dosed daily with very large amounts of the former, until they reached a moribund condition, recovered promptly if the dosing was discontinued.

From this study, this treatment solution is about 50 times less toxic than is Fowler's solution (since it contains eight times less arsenic x 5½ times less toxicity) and in any case the complete formula as dispensed cannot be swallowed and retained in appreciable amounts, toxicity therefore appears of no importance in its use.

Tooth etching

The pentavalent arsenic used in this treatment, however, has one feature making its use in this manner quite difficult. This difficulty is due to the fact that arsenates and phosphates are isomorphous. Thus merely placing a neutral arsenate solution in contact with the phosphates of the teeth causes the phosphate to dissolve and the arsenate to precipitate. This replacement reaction is a result of the isomorphous nature of the two ions, and this replacement continues till an equilibrium is set up, i.e. until the surface of the teeth is of the same ratio of PO_4 to AsO_4 as is the solution in contact with the teeth.

After such surface replacement of the tooth phosphate by arsenate, the saliva gradually removes the layer of calcium arsenate, as a foreign material, and the final result is an etching of the teeth exactly similar to the results produced by an acid, and personal trials made with neutral arsenate solutions showed that this attack is quite serious if the effect is repeated.

This attack by arsenates can be reduced by adding calcium, magnesium and phosphate ions to the mouth wash but unfortunately at any pH which may be used these ions cannot be added in any very appreciable amount as calcium and magnesium phosphates are not very soluble. This method, therefore, will reduce attack on the teeth, but will not prevent it.

Unfortunately this replacement reaction cannot be prevented, but there is one method by which the composition of the solution can be so adjusted that damage to the teeth does not occur.

This method, of which use is made in the formula already given above, is to utilize a solution supersaturated with respect to calcium and magnesium phosphates—the main constituents of teeth.

As is well known supersaturated solutions tend strongly to deposit their excess solids, and particularly do so if placed in contact with this solid. The solution noted above therefore deposits the excess phosphates as a precipitate merely on storage, or if placed in the mouth similar deposition will occur on the surface of the teeth.

If now this chemical deposition of precipitated calcium phosphate on the teeth is as rapid, or more rapid, than the replacement reaction (exchanging PO_4 into AsO_4) it is clear that the tooth

surface itself cannot be attacked by the arsenate ion.

The above ideas are of course theoretical, but personal tests confirmed their essential correctness, and it was found that a supersaturated solution of calcium phosphate (made by adding $CaCl_2$ solution to a separately prepared solution of the Na_2HPO_4) entirely prevented all etching by the arsenate in the above recipe, while solutions containing calcium phosphate, only up to saturation concentrations did not do so.

The Production Of Supersaturated Solutions

It is of course axiomatic that solids will not dissolve past their saturation value, nevertheless in this case it proved possible to prepare solutions supersaturated with respect to Ca and Mg phosphates by splitting these compounds into their respective ions, and adding these ions to the mixture in the form of other soluble salts: sodium phosphate, and as calcium and magnesium benzoates respectively. For various reasons which need not be discussed in detail, these salts dissolve individually without hindering each other, and not until the ions come together in the solution does any tendency towards precipitation occur. The solution prepared in this way is about three times supersaturated in respect to calcium phosphate, and gives no detectable etching of the teeth. Solutions prepared in this manner are stable for a few days, but gradually deposit the excess phosphates as a precipitate, and should therefore be prepared only as needed.

pH Of Solution

The acidity of the solution requires rather close control, since if too acid, this is itself objectionable, as it obviously encourages tooth etching; while if too alkaline, enough Ca and Mg salts cannot be retained in the solution to combat the arsenate replacement reaction, furthermore the peroxide becomes unstable. For best results the pH should be from 5.0 to 5.2. The salts are of course chosen to give this value.

The "loritol" (cetyl polyglycol ether) is a foaming agent, used both to assist penetration of the solution into crevices, and also to form a stiff foam with the peroxide in these crevices. This has a mechanical effect in helping to lift debris and assist cleansing. Most foaming agents are useless in this solution since it contains so much Ca and Mg, this foamer is therefore chosen as it gives an excellent foam, and also resists the action of peroxide. Clinical tests with and without this foaming agent indicate clearly that it is a useful addition, cases responding more rapidly when it is used.

Use Of The Mouth Wash

This treatment is used as dispensed, without further dilution, about ½ oz. being vigorously rinsed in the mouth for two minutes. It is then expectorated and the patient is advised not to eat or drink for half an hour. This is repeated four times a day, after meals and on retiring. Although it is probably of little significance, the patient is cautioned not to swallow any of the solution.

Clinical Results

Of the many thousands of cases treated by this method, a number were photographed in colour, and of these, three are here reproduced in black and white.

Case A: Positive Vincent's smear,

FIG. 1
Case A. Acute periodontitis

acute inflammation of entire gums, papillae much swollen and rounded, Fig. 1. After 2 days' treatment with the mouth wash only, Fig. 2 was taken, showing much reduction in the inflammation, only small areas at the gum line now being involved.

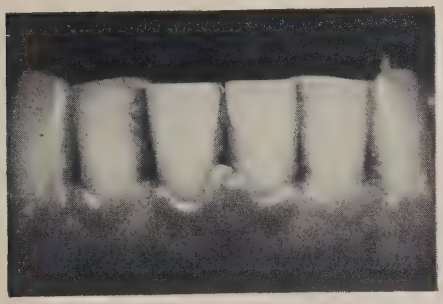


FIG. 2
Same as Fig. 1, after 2 days' use of mouthwash.

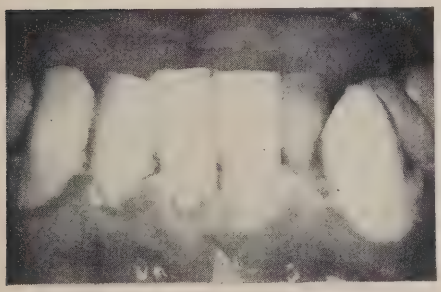


FIG. 3
Ulcerative periodontitis

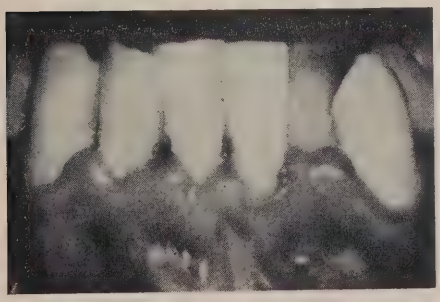


FIG. 4
Same as Fig. 3, after 3 days' use of mouthwash.

FIG. 5
Ulcer of the Cheek

FIG. 6
Same as Fig. 5, after 1 day's use of mouthwash.

FIG. 7
After 3 days' use.

Case B: Positive Vincent's smear, continuous ulceration throughout the gum line and interproximal spaces, Fig. 3. This case was at first treated only with the mouth wash, and Fig. 4 taken after 3 days. Ulceration was completely eliminated, although considerable inflammation remained, the greatly improved condition of the tissue

FIG. 8
After 6 days' use.

is evident. In this case other measures were now instituted.

Case C: Positive Vincent's smear, ulcer of the cheek, Fig. 5. Treated only with the mouth wash. Serial photographs are shown in Figs. 6, 7 and 8, after 1, 3 and 6 days respectively. Great improvement was shown in one day and it will be seen that without other treatment the site of the ulcer is barely noticeable after 6 days' use of the mouth wash.

One feature of the treatment is that cases of necrotic gingivitis respond with remarkable uniformity. Pain is often perceptibly reduced in eight hours and rarely persists after 24 hours, the patient generally being comfortable the day following the initiation of treatment. Other acute signs and symptoms rapidly subside and the tissues are ready for further corrective measures in three days. However, if the mouth wash is used for a few days longer a further reduction of the inflammation is often observed. There is also no manipulation of acutely infected tissues, the treatment causes no tissue destruction and is painless. Of the thousands of cases treated in the services there was no report of any case failing to respond to this treatment.

It might also be noted that since Vincent's organisms, possibly in a less pathogenic form, often complicate or aggravate other less specific oral inflammations, in many such cases the use of the mouth wash results in considerable reduction in such conditions. A number of cases of Vincent's infection of the tonsils have also been treated successfully with the mouth wash.

To date, although many thousands of patients have been treated with this solution, none has showed any adverse or toxic reaction whatever which could be attributed to arsenic.

REFERENCES

(1) Box, H.K. and Ham, A.W. Oral Health, 32: 721-736. 1942.

The position of the doctor in the community is in the last resort determined by the fact that he belongs to a learned profession dedicated to caring for the health of the people. The medical profession is older than parliaments and ministries, and whatever the changes in the organization of its services it has always retained its essential character. It is therefore important that, whatever alterations there might be in the form of professional organization, nothing should be done to impair the status and prestige of medicine and those of its traditions which are other than the passing changes of fashion. Apart from the difficulties and disadvantages of converting the B.M.A. into a medical trade union, such a transformation of a voluntary association of medical men and women might end in altering for the worse the essential nature of a great calling.—From Editorial, "A Trust Fund," Br. Med. J., February 26, 1949.

A survey among the trades groups in the U.S.A. reveals: electricians', sheet metal workers', brick masons', tile setters', terrazzo workers', steamfitters' and cement finishers' dues range between $57.00 and $84.00, or an average of $68.00 annual dues. —Excerpt from Editorial in Jour. Mich. State D. Soc.

SOME DENTAL ASPECTS OF MAXILLO-FACIAL INJURIES

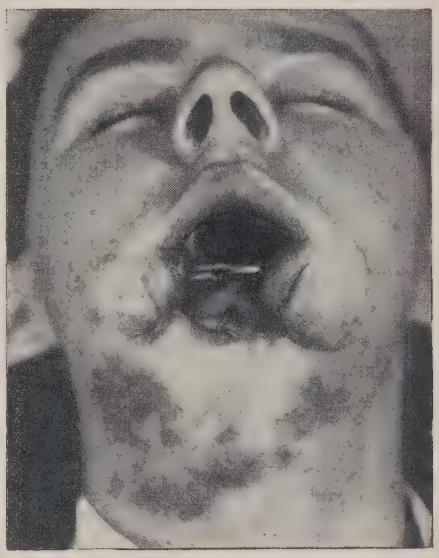
by GEO. M. MacDONALD, M.B.E., D.D.S., M.S.D. (Major, R.C.D.C. Retired)
and
ALEX. T. ROGER, M.B.E., D.D.S. (Major, R.C.D.C. Reserve)

(Concluded from April issue)

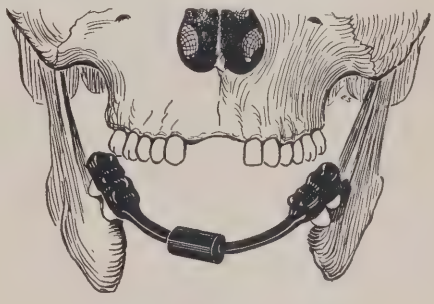
PROSTHESES

The designing and construction of numerous types of prostheses was an important part of the responsibilities of the C.D.C. This was particularly true in regard to all hospital dental clinics, and in the establishment at B.N. & P.S.H. special emphasis was given to this phase of our work. In this regard great credit should be given to our laboratory technicians, particularly Sgt. Leo Tiede, B.E.M., who with his staff maintained production of all required splints and other prostheses, despite many and varied demands for these appliances. These men were of invaluable assistance in working out various designs and technical devices, as applies to unusual prosthetic requirements.

The production of prostheses covered a number of items which are not primarily considered as dental appliances, but which were referred to the Dental Services for consultation in design, construction and application. In discussing prostheses, we might differentiate between treatment prostheses of a temporary nature and restorative prostheses of a more or less permanent type. Most of the work at B.N. & P.S.H. was of a treatment or temporary nature. There were only a few cases of extensive loss which were retained in this hospital long enough for fitting with a permanent type of prosthesis. These cases, which did require a permanent type of prosthesis, exhibited oral and facial defects which by their nature were not totally repairable by surgical means alone. In cases of this type it was essential that the sequence of surgery be planned to synchronize with the oral prosthetic requirements. An example of this procedure is illustrated in Case No. 223.



CASE NO. 223
Appearance of defect on arrival from Italy.



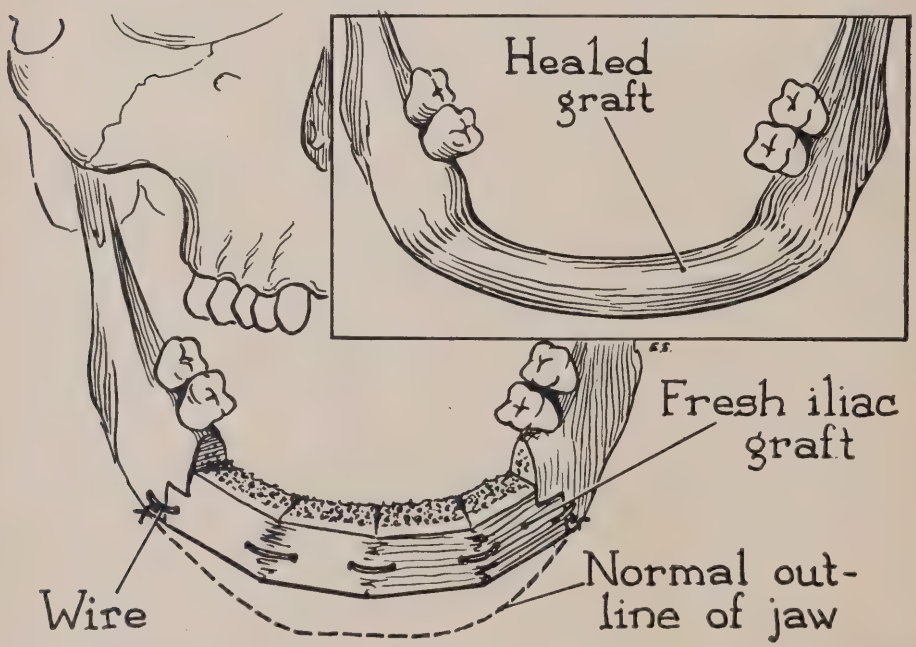
CASE NO. 223
Original bone loss, with dental splint, on arrival from Italy.

Prostheses and other appliances of a dental nature, for use in the mouth and adjacent areas, were of great variety. In design they were either

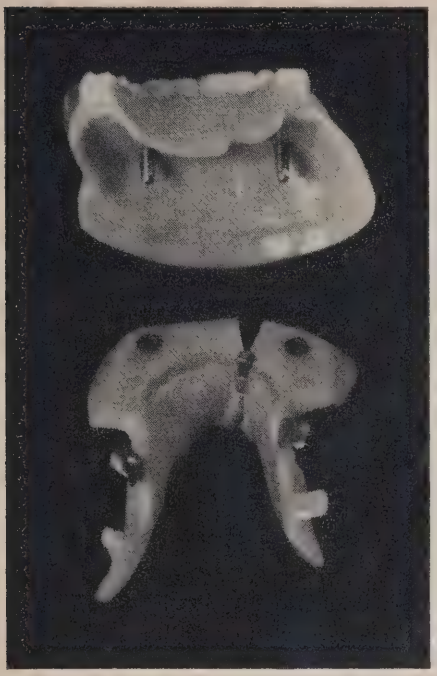
CASE NO. 223
Intermediate stage in the development of the tube pedicle graft.

tooth bearing, as cast cap splints, or tissue bearing, as full or partial dentures, with attachments for obturators, chin-lip molds and saliva dams, contour and epithelial inlay retainers, or extra-oral extensions for various purposes. In the fitting and adjusting of prostheses over soft tissues, care was exercised to avoid irritation of freshly healed areas, and in practice a smoothly finished and polished acrylic surface was usually found to be well tolerated.

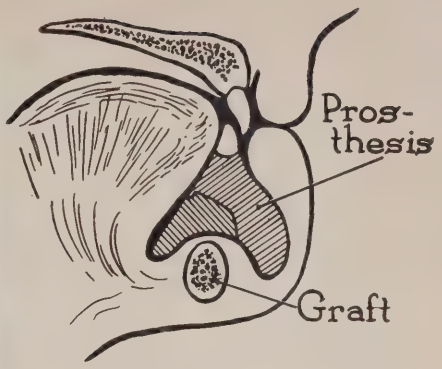
One of the first considerations in the treatment of these injuries was to restore physiological function to a near normal level as soon as possible. The loss of normal function through defects of the lips and palate, affected the patient's deglutition, saliva retention and speech; and also interfered with his smoking enjoyment. Early restoration of function, by means of obturators and chin-lip prostheses, greatly increased the patient's well be-



CASE NO. 223
Sketch illustration of typical bone graft for large mandibular bone loss.



CASE NO. 223
Final prosthesis, showing hinged arrangement of base section for lingual retention, and the prominence of the chin section which provided contour and support for the soft tissue and also increased the stability of the denture.



CASE NO. 223
Saggital section showing desirable relationship between bone graft, soft tissue restoration and the prosthesis.

CASE NO. 223
Final appearance of patient.

ing and was reflected in an improved morale, which was often adversely affected by such frustrating injuries. A method for closure of mandibular lip loss, by temporary prosthesis of flexible plastic attached to a dental splint, is illustrated in Case No. 336.

Temporary palatal obturators were retained by partial dentures, or cast-cap splints, or were designed as sectional full dentures. Black gutta percha (Ash & Sons Eng.) was an invaluable asset in forming temporary obturators and tissue retaining forms.

A prosthesis as illustrated in case No. 382 fulfilled several functions. First, it provided contour support for

CASE NO. 382
Shell wound which produced extensive shattering and loss of facial bones.

the soft tissues, which otherwise rapidly contract in an attempt to obliterate an unnatural space. Secondly, it acted as an obturator thus facilitating deglutition and speech. Thirdly, it provided an attachment for maxillary teeth, although these were mostly for the cosmetic effect.

Among the prostheses required were skull plates for cranial defects, which we constructed of Tantalum sheets (.015″ ga.) by swaging, or of methyl methacrylate by the usual moulding and curing method. The choice of material was decided by the neurosurgeon, but was often influenced by the location and contour of the reconstruction.

The methyl methacrylate type of plate appears to have been satisfactory from the standpoint of tissue tolerance, but the tantalum provides an ease of adaptability which facilitates adjustment and is usually accepted as the material of choice for these restorations.

We have a record of one hundred and three tantalum skull plates and forty-seven acrylic skull plates which were constructed for the Department of Neurosurgery at B.N. & P.S.H.[7]

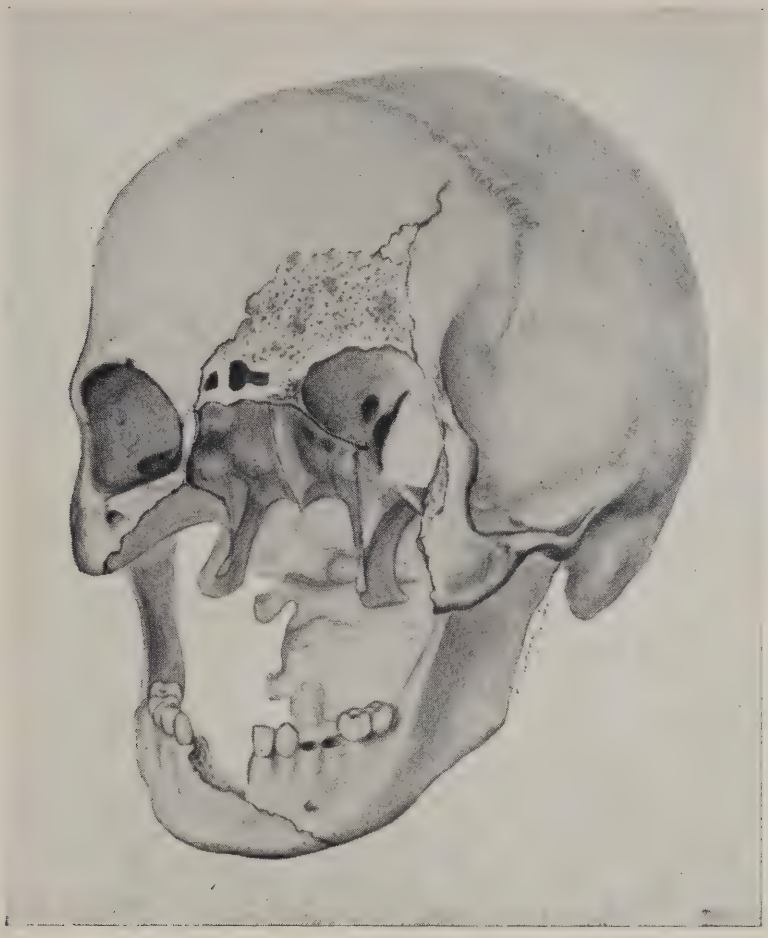
Facial prostheses, such as illustrated in case No. 607 were of a temporary nature pending surgical reconstruction. Several prosthetic ears were constructed for replacement of total ear loss which is considered a difficult procedure surgically.

In our construction of these facial prostheses, we were fortunate in being supplied with one of the new flexible resin materials through the Plastics Division of the Imperial Chemical Industry. ("Corvic" a poly-vinyl chloride co-polymer). This material exhibited a resilient rubber-like texture of a pinkish colour when processed, and we tried it experimentally in the construction of various oral and extra-oral prostheses. We found this material of great promise in the production of life-like temporary appliances, but unfortunately when used in the construction of obturators in the mouth, or as chin-lip prostheses and saliva dams, this material showed a tendency to absorb mouth fluids and harden rapidly.

Artificial eyes were required in the treatment of many cases and considerable work was done on the moulding and fitting of treatment, and cosmetic, eye prostheses. Methyl-methacrylate was being used by our British confrères for this purpose, in an effort to fill the requirement which had previously been met by glass eyes, most of which had been supplied from Germany and Central Europe, previous to the war. By experimenting with various methods and techniques, we produced a number of plastic eyes for our patients and these were an acceptable adjunct to other facial restorations.

Restorative Treatment

Restorative treatment refers to the surgical and prosthetic procedures which were required to improve the appearance and restore function after the early operations and treatments were completed. As much as possible of the restorative treatment was un-



CASE NO. 382
Showing bone loss and fracture lines. From original x-rays and sketches.

dertaken at B.N. & P.S.H., but the completion of extensive plastic surgery and semi-permanent prostheses for these patients has been continued over the post-war years in Veterans' Hospitals, under the Treatment Services programme of the D.V.A. In many cases this late restorative treatment has been undertaken by the same medical and dental personnel who were responsible for the original Overseas treatment, thus allowing a continuity of treatment planning and observations. Subsequent operations consisted of plastic surgery, for repair of soft tissue defects, and bone grafts, for repair of bone loss. Mouth operations were mostly for closure of fistulae and restoration of sulci.

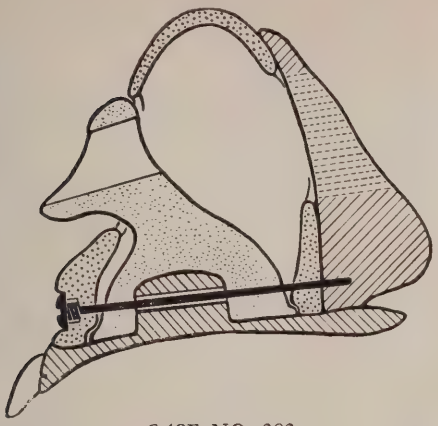
Repair of soft tissue defects by means of local flaps, tubed pedicles, or free grafts, was carried out by the plastic surgeons as the case required. In certain cases, it was helpful to place form-retaining prostheses in the cheek, lip, chin or other areas, as an aid to the surgeon in moulding and forming the soft tissue reconstruction. This practice was also a precaution against the obliteration of future denture space. Defects requiring replacement of both hard and soft tis-

CASE NO. 382

Final prostheses—front, profile and disassembled views. Main section is hollow and all sections were locked by the transfixing pin lock. The eye form is temporarily attached to show the relationship when in situ.

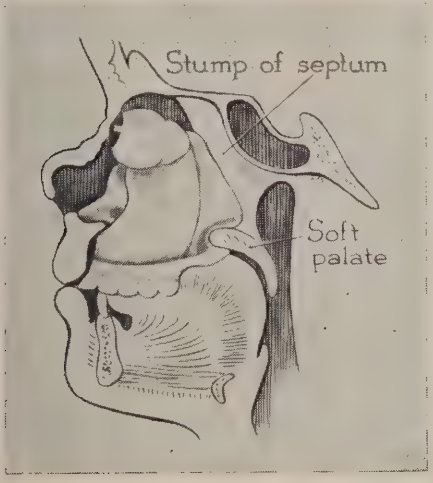
sues were first repaired with a soft tissue graft, in order to prepare an acceptable bed for the placing of the bone graft. Case No. 223 illustrates a few stages of this technique.

The bone grafting technique, as developed by the plastic surgery staff, was a highly successful and excellent method of repair for cases with a total or partial loss of continuity of the mandible. They were also used in a few cases of maxillary repair with satisfactory results. Cancellous bone chips, or a combination of cortico-cancellous bone block plus cancellous bone chips, were used as the case required. Cases of minor bone loss and of nonunion were repaired with cancellous bone chip grafts, whereas extensive bone loss was usually corrected by the



CASE NO. 382
Detail of sectional prosthesis and pin lock.

CASE NO. 382
Appearance of patient ten months after injury with prostheses in situ. A study of the x-rays indicated that the patient may have exhibited a natural ocular hyper telorism which is here increased due to loss of attachment for the medial orbital ligaments.



CASE NO. 382
Assembled prostheses in situ. The acrylic eye was inserted externally and its base was formed as a saddle to rest over the maxillary prosthesis thus preventing rotation of the eye in the socket.

Retention was obtained anteriorly by the extension into the nares, and posteriorly by extensions into the nasopharynx which rested on the soft palate.

fitting and wiring in place of a cortico-cancellous block plus cancellous bone chips.

The detailed surgery of bone grafting is not within the scope of this review, but we should say that bone grafting for the repair of jaw defects requires close adherence to the principles of treatment for fractures, as regards fixation and immobilization, and to the principles of plastic surgery, as regards the blood supply, which is of prime importance.

In the provision of fixation for bone grafts, it was necessary to provide adequate support which could be utilized over a prolonged period of time if required. In one of our cases, support was maintained of a large bone graft (7 c.m.) to the mandible by means of a cast cap dental splint for over a year. Our records show a total of 98 bone grafts most of which were for repair of mandibular gun shot wounds.

Muscle trismus, following trauma and scar formation, often required active treatment, in contra-distinction to temporary "disuse" trismus of the masticatory muscles, which followed immobilization and which recovered spontaneously. The method used for overcoming fibrotic trismus depended on the degree of scar formation. Minor disabilities were corrected by regulated exercises using occlusal plate type of appliances activated by elastic

bands, or by inserting graduated occlusal blocks of black gutta percha. It is thought that a re-arrangement of the scar tissue fibres is gradually produced. An early return to a normal diet stimulated further recovery. With extensive fibrotic scar trismus, it was found necessary to release the scar fibrosis surgically and to block the mandible in the open bite position, temporarily, to prevent a recurrence of contraction. It was essential to differentiate trismus of muscle origin from ankylosis due to bony displacement or mal-union. Any disability from bony interference with mandibular function was relieved by surgical intervention.

The recovery and restoration of function by damaged motor and sensory nerve trunks or fibres was in direct inverse ratio to the degree of damage. Motor nerve damage resulted in various degrees of temporary or permanent disability of function, which was most noticeable when involving the facial nerve (VII) and its branches. Restoration of facial expression in cases of permanent VIIth nerve damage was undertaken by the plastic surgeons, who had considerable success with operations utilizing portions of the temporalis muscle. In the most successful operations an acceptable degree of re-animation was obtained. Several types of prosthetic sling supports were fashioned to support the corner of the mouth, during recovery from temporary facial paralysis. These were usually extended from the ear with elastic bands to a plastic hook in the corner of the mouth. This support during recovery helped to prevent a permanent distortion. There was little evidence to indicate that normal regeneration occurred following an actual sectional loss of a nerve trunk or fibre. The return of a modified sensory impulse to areas with severe sensory nerve damage was considered to be a protopathic or anastamosing phenomenon. Minor nerve trauma, such as occurred with crush fractures, usually recovered gradually over a period of weeks or months.

One of the most common mouth disabilities following G.S.W's., from the dental view point, was the elimination of the buccal, labial or lingual sulcus by reason of scar contraction or tissue loss. The relief of the scar contraction and the restoration of the sulcus was accomplished by the use of free epithelial grafts which were used to line the raw surfaces of various surgically or traumatically produced cavities.

For an epithelial inlay in the mouth, an appliance such as a partial or full denture, cast cap splint, etc. was usually first designed to hold the inlay form in position. The inlay form was moulded of dental compound or black gutta percha and retained by fixed or detachable retention fitted to denture or splint. The new sulcus was obtained by incising close to the periosteum and over extending it in length and depth to allow for subsequent contraction. The compound or gutta percha was placed on the retention device and moulded to conform to the incised sulcus. A split skin graft was everted and applied over the moulded form which was then replaced in the newly incised sulcus where it was usually held immobile for 21 days. These reformed sulci had a tendency to obliterate themselves rapidly unless maintained by early fitting of dentures or retaining forms.

Summary

The foregoing is a very brief review of the work on maxillo-facial injuries at Basingstoke Neurological and Plastic Surgery Hospital which was undertaken by the Canadian Dental Corps.

Most of the primary treatment for these battle casualties in Western Europe was handled by British Maxillo-facial Surgical Teams, who rendered invaluable service.

The outstanding advances in the treatment of these injuries were the excellent control of infection through the use of chemo-therapy, and the comprehensive surgical reconstruction of both bone and soft tissue loss,

which was accomplished by the plastic surgeons.

The provision and application of fixation, prostheses and other treatment appliances covered a field of considerable extent. The types and variations were limited only by the ingenuity of the dentist and technician, and by the available supplies. The production of certain appliances was influenced by the newer plastic materials.

The methods of treatment, and the appliances used for these maxillo-facial war injuries, as reviewed here, are considered to be complementary to proven principles of treatment and, with modifications, are applicable to many of the more extensive civilian injuries.

REFERENCES

1. Barclay, L. T., Lt. Col.; Gordon, S. D., Lt. Col.; Campbell, H. H. Major; R.C.A.-M.C.
"Management of Jaw Fractures"
Surgery, Gynecology and Obstetrics. Vol. 84 - 973-978. May 1947.

2. Fry, Shepherd, McLeod and Parfitt.
"The Dental Treatment of Maxillo-Facial Injuries"
Blackwell Scientific Publications Ltd., Oxford, 1942.

3. Major I. A. L. Millar, Major R. D. Reid, Major J. J. Schacter, Major K. Levinson.

4. No. 5 M.F.S.U. commanded by Major Hynes, R.A.M.C.
No. 6 M.F.S.U. commanded by Major Fitzgibbons, R.A.M.C.

5. Ogilvie W. H., M. Ch., F.R.C.S. Major General R.A.M.C.
"Some Applications of the Surgical Lessons of War to Civil Practice"
British Medical Journal, May 5th, 1945, page 621.

6. Gordon, R. A., Major, R.C.A.M.C.
"Anaesthesia in the Plastic Surgery Unit Canadian Army Overseas"
Bulletin, Academy of Medicine, Toronto, August 1946.

7. From operative records supplied by Dr. Harold E. Elliott, Director of Neurosurgery, Queen Mary Veterans' Hospital, Montreal, formerly on the Neurosurgical staff at B.N. & P.S.H.

ANNOUNCEMENTS

Eastern Ontario Dental Association Convention

This Convention will be held at the Chateau Laurier Hotel, Ottawa, September 11, 12, 13.

Dr. Aimé Coutûre—President
Dr. Paul Coté—Secretary

Northern Ontario Dental Association Convention

This Convention will be held at the Empire Hotel, North Bay, on September 8.
Dr. Douglas Tanner, University of Toronto and Dr. O. D. Legge of Sudbury will be guest speakers.
Visitors will be made very welcome.

Dr. Ralph Foster—President
Dr. V. S. Fournier—Vice-President
Dr. R. A. Torrance—Secretary

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at The Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver anniversary of the inauguration of this annual event.

A.D.A. Annual Session

The 90th annual session of the American Dental Association will be held Oct. 17 to 20 at colourful San Francisco.
Steal a few extra days and visit the state in which exists nearly every combination and extreme of topography, climate, soil, mineral, plant and animal life in the United States.

COURTESY IN A DENTAL OFFICE*

by BARBARA TESLUK, Department of Public Health, Swift Current, Saskatchewan

Receiving the Patient

A WARM welcome that is courteous, gracious and pleasant does more to make a patient feel at ease than almost any other act.

Acknowledge the patient's arrival within two minutes of his arrival.

Greet them cheerfully.

If you are not ready for your patient tell him whatever length of time you feel sure it will be. Do not say a few minutes when you mean ten.

If you had to work in an emergency, tell the patient. He will understand.

When The Operating Room Is Ready

Ask the patient to come in.

If necessary, say, "Please be seated."

Adjust the head rest and do not hesitate to ask the patient if he is comfortable.

Introduce a new patient to the doctor.

Prepare The Patient

Place a clean towel around the patient's neck.

Place a clean drinking glass on the unit.

If necessary a tissue should be given the patient to remove lipstick.

Eye glasses should be removed and put in a safe place.

If impressions are to be taken put vaseline on the patient's lips.

Place removable dentures in a bowl of water with a speck of soda in it.

Place patient's charts and x-rays on the cabinet.

Place the needed instruments on the tray.

Basic Information

Be tactful about securing information from a new patient.

This should be completed before operative procedure. Ask only the questions you feel necessary: Many questions will be answered during your conversation.

Basic Information Should Consist Of

Name
Address Home Business
Telephone No. Home Business
By whom referred.

Oral Charting

It is very important to secure complete oral charting on the first appointment, such as:

Teeth missing
Drifting
Devitalized teeth
Crowns
Bridgework
Malformations

Occlusion

This is conducive to a businesslike atmosphere and good dentistry. The patient feels you are interested in rendering the best service. Your patient, in turn, will be businesslike and co-operative. After complete diagnosis give the patient an estimate for the necessary services. Thank you cards are very much appreciated by patients who have referred someone to the dentist.

Courtesy, kindness, and the smile are among the prerequisites of a successful practice and you, as assistant, should be ever mindful of them.

The Telephone is a Door to your Office

Answer it promptly.

Your voice should be kept well modulated.

Clear enunciation.

Speak with a smile.

Always identify your office and yourself.

Use the patient's name when speaking to him.

Courtesy in a Dental Office

Use the telephone:—

To remind patients whose appoint-

*Presented at the Winter Clinic of the Academy of Dentistry, Toronto, November 1948.

ments have been made far in advance.

Call the day before.

To call patients who have broken their appointment. This should be done ten minutes after the time of the appointment. You may have been the one to make the mistake in the day or time.

Telephone Courtesy is:—

Be pleasing

Be prompt

Be accurate

When a Caller Wishes to Speak to The Doctor

Ask for the caller's name, and, if the call is personal or professional.

If the call is not important, or if the doctor is busy, pleasantly say, "The Doctor is operating. May I give him your message, or leave your number and he will call you at his first opportunity."

Do Not Forget To Relay The Message Or Give The Doctor The Number To Call.

THE ABC'S FOR A DENTAL ASSISTANT

Always be competent.
Always be clean.
Always be courteous.
Always be conscientious.

DISMISSING THE PATIENT

Plan appointments to complete the necessary services.

Ask the patient his preference as to the time of day and the day of the week.

Make out an appointment card with the complete list of appointments.

IF SURGERY HAS BEEN DONE

Give the patient instructions for post-operative home care. In a plain envelope give the patient a sedative with written instructions as to their use. Free sample envelopes are much too impersonal.

IF DENTURES HAVE BEEN INSERTED

Instruct the patient as to the care necessary in keeping them clean; the kind of brush to use and what to clean them with.

IF A PATIENT PAYS CASH

Make out a receipt.

Remind the patient of the time of his next appointment.

Help the patient on with wraps if necessary.

Always say good-bye, or acknowledge in some way, the patient's departure.

I like to think that were Osler with us today he would resist the allurement of the song of the siren of Politics and even, if need be, order his sailors to bind him to the mast of his ship until the danger was past. It is clear to me, from talks I had with him as well as from his published essays, that an attitude of dignity and calm detachment would have characterized this great custodian of Medicine in face of the threat of political pressure.

I have more than once, in my own fashion, preached this gospel. "It is paramount that we remain detached from the general clamour . . . political clamour, the clamour of 'left' and of 'right'. For Medicine there can be no left or right. For Medicine there is only expert knowledge and a rooted adherence to truth . . . Detachment, public confidence, courage—these are the essentials that enable Medicine to make its contribution to the common Health and Happiness."

One of the finest tributes to the heritage of which we are the trustees was that of Karl Marx: "For thousands of years," he said, "Medicine has united the aims and aspirations of the best and noblest of mankind. To deprecate its treasures is to discount all human endeavour and achievement as naught."

As a humanist I passionately want to see this great heritage placed at the disposal of my fellow men. It is a pity that the present effort of the State to bring this about has so largely failed of its purpose. It might have been a great success. We must still labour to make it so.—Lord Horder, G.C.V.O., M.D., F.R.C.P. in Br. Med. Jour., Apr. 2/49.

ANNOUNCEMENT

MARITIME DENTAL CONVENTION 1949

FACTS ABOUT MARITIME MEETING

DATES: **August 31st, September 1st and September 2nd.**

PLACE: **St. Andrews, N. B.**
70 miles from Saint John
20 miles from Maine Border (Calais)

Train service from Montreal, Boston and points west
Transfer point by train from these centres, McAdam, N. B.

Nearest Airport, Pennfield, about thirty miles from St. Andrews.

Bus service from Saint John and other centres.

HOTELS: **The Algonquin** (Place of meeting)
one of the C.P.R.'s finest summer hotels—230 rooms
Rates: $13.00 per single person
$11.00 per double room
These rates are American Plan which includes meals.

The Commodore Hotel—30 rooms.

Rates: $7.50 for single, American Plan
$7.00 for double, American Plan

The Seaside Inn—accommodation for 30 to 40
Rates: $7.00, $8.00 and $9.00 per person, American Plan.

ENTERTAINMENT: **For the Ladies:** Golf, Swimming, Tennis, Dancing, Bridge, Motion Pictures, Scenic Drives.

For the Men: Golf, Swimming, Tennis, Deep-sea Fishing.

CLINICIANS: Dr. Stephen Mallett, Oral Surgeon, Chief of Dental Dept., Boston City Hospital.

Dr. Irving R. Hardy, Prosthodontist, in charge of this Department at Tufts College.

Dr. George Hall and Dr. A. L. Keltie, Boston, Davis Technique for Synthetic fillings.

ESSAYISTS: Dr. D. P. Mowry, Dean of McGill Dental School.
Dr. Roy Ellis, Dean of Toronto Dental School.

TABLE CLINICS: Dr. J. P. Coupland, Ottawa—Reduction of Radiographs.
Dr. Reginald Wynn, Montreal—Orthodontia.
Dr. Robert Ogilvie, Fredericton—Gold Foil.
Dr. R. E. Lussier, Montreal.
Dr. J. W. MacLeod, Truro—Staining Acrylic Teeth.
Dr. L. I. Duffy, Charlottetown—Rubber Dam.
Dr. John Merritt, Halifax—Jacket Crowns.

Motion Pictures on Dental Subjects.

On Thursday evening there will be a cocktail party followed by a dinner and dance. An outstanding speaker is being arranged for the dinner.

On a date to be announced in our program there will be a luncheon meeting of the Canadian Defence Dental Association.

Reservations should be secured early through Dr. Howard MacDonald, 161 Charlotte Street, Saint John, N. B. In applying for reservations, fill out the following:

Print name and address.

Number in party for which accommodation is desired.

State approximate time of arrival and whether travelling by car, bus or train.

Acknowledgement of reservations will be mailed to you. To facilitate this and offset any chance of error, why not enclose a stamped envelope with your name and address.

We cannot stress too much the need for making your reservations early through

DR. HOWARD MacDONALD,
161 CHARLOTTE STREET,
SAINT JOHN, N. B.

A PROGRAM WILL BE MAILED TO YOU ABOUT JULY 25TH

The Forum

FLUORINE—HOW CAN THIS BE A PUBLIC HEALTH MEASURE?

Condensed from Editorial in Jour. of California State D. Assoc. Apr., 1949

Recently a public health nurse said: "Now that fluorine is painted on teeth, we have a real public health measure to use on all the school children of California." But do we? Let's examine the facts. The usual treatment calls for a prophylaxis and fluorine treatment the first visit. This probably would take at least thirty minutes. No prophylaxis is done on the second, third or fourth treatments, so let us assume twenty minutes for each of the last three treatments—a total of ninety minutes—and this probably short of the time spent by most dentists.

For example, let us take the Oakland, California, schools. There are in these schools 40,000 children of 14 years of age and under. To fluorinate topically their teeth would require 40,000 times 1½ hours, or a total of 60,000 hours. A school day consists of five hours, so this would take 12,000 days. There are 176 school days per year. One hundred seventy-six into 12,000 goes about sixty-eight times. So it would take one dentist sixty-eight years to fluorinate the teeth of Oakland's school children. Or to figure it another way, it would take sixty-eight dentists to do this in one year. The dental profession just does not have this quantity of personnel lying around. Topical fluorinization does not lend itself to a public health approach.

In addition to all of this, you must have the written consent from a parent of each child, so there is a clerical staff required also. Then there is dental equipment, including an air compressor, etc. It is therefore obvious that we must have a better approach than topical fluorine to have a successful treatment for the mass of children.

The epidemiological work done by the U.S. Public Health Service by H. Trendley Dean et al. indicates that wherever the fluorine is in the water naturally to about 1 or 1½ parts fluorine per million these areas compared with an area of no fluorine have only about 40 per cent of the decay that the no-fluorine area presents.

These are impressive figures. If true, why don't we fluorinate our water supplies up to 1 ppm to get this caries reduction? Grand Rapids, Michigan, and Newburgh, New York, have both fluorinated their fluorine-deficient waters up to about 1 ppm. and in a few years there no longer will be any argument as to presumptive evidence.

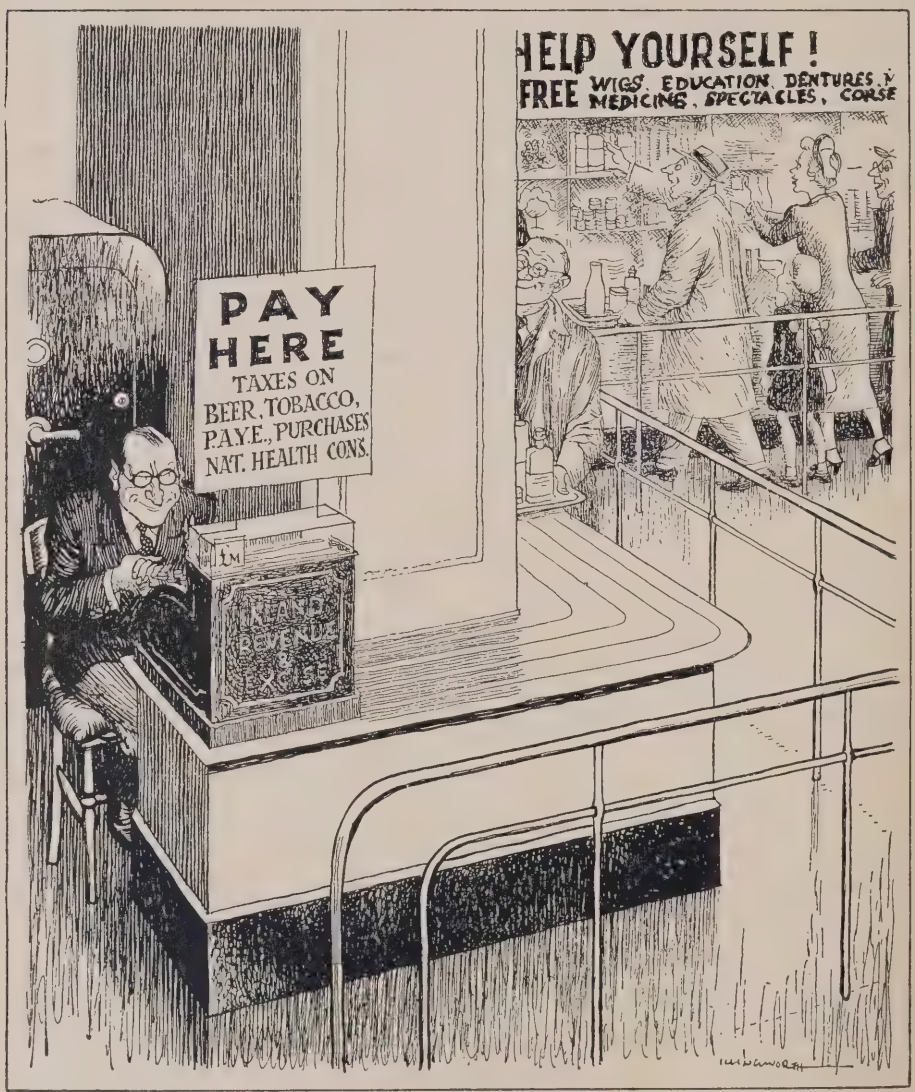
If all of the presumptive evidence in behalf of fluorine as presented by the U.S. Public Health Service under Dean et al. stands up, here is a dental public health measure that will take no additional dental personnel, that will get to all of the people in the towns and cities with communal water supplies, and since it is estimated that two-thirds of the people of America are on communal water supplies this, indeed, may be the great approach to reduction of dental caries that the dental profession has long worked to achieve.

That government is the strongest in which every man feels a part.—Thomas Jefferson

All hydrocolloid impressions should be poured immediately. Under no circumstances should they be immersed in solutions or wrapped in a wet towel and sent out to a commercial laboratory for pouring.

Immersion of impressions in potassium sulphate does not maintain them in equilibrium any more than immersion in water after the critical end point has been reached. —*Allison D. James, Beverly Hills, Calif. in J. Dent. Res. April, 1949.*

You can preserve anything in alcohol except your health, your secrets and your job.—*French proverb.*



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ROUND THE CORNER

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Editorial

OUR NATIONAL CONVENTION

Once more a great dental meeting has come and gone. Nearly three hundred dentists gathered early in June from all over Canada at the Bessborough Hotel in Saskatoon, Saskatchewan, to listen to outstanding essayists and clinicians unfold the latest findings on dental problems. The theme of the meeting was "Prevention" and rightly so as that should be the aim of every practising dentist.

This was a joint meeting of the Canadian Dental Association and the Western Canada Dental Society, the latter group holding meetings every two years alternately in the three prairie provinces. The Saskatoon men under the general chairmanship of Dr. C. B. Hallett had full charge of the meeting and did a splendid piece of work every detail being carried out with meticulous care and enthusiasm.

At this meeting Dr. L. J. D. Fasken of Regina, Saskatchewan, one of the best loved dentists of Western Canada, and President of the Western Canada Dental Society was specially honoured by being made an honorary life member of the Canadian Dental Association and in being presented with a portrait of himself in oils which is to be hung in the University of Saskatchewan.

The wives of the Saskatoon dentists under the leadership of Mrs. R. L. Toren who had charge of the Ladies' Program are to be specially congratulated upon the very successful arrangements made for entertaining the visiting ladies at the convention.

At this same time the Canadian Dental Nurses' and Assistants' Associa-

tion in conjunction with the Western Canada Dental Nurses' and Assistants' Association held a most instructive and inspirational convention at the Bessborough. Representatives from many provinces of Canada were in attendance and as these delegates return home and carry their newfound ideals with them this profession should reach an even higher pinnacle of achievement than ever before. This National Association could hardly fail in reaching its objective with the untiring devotion of its president Mrs. Marion Edwards of Toronto to give leadership to the cause.

Perhaps more important than any paper or clinic at a meeting of dentists such as this are the social contacts and discussions which take place around the convention halls. In this regard Sir Henage Ogilvie, K.B.E., M.C., F.R.C.S. had this to say in the April 16 issue of the British Medical Journal —"The man who works hard and conscientiously does his most important work when he outspans his mind and allows it to wander at its own pace 'round the paths over which it has been rushing, and that science is advanced further in a shorter time by the informal chatter of a few like-minded friends than by the formal exchange of papers or by any number of congresses." And this is particularly true in the wholesome, friendly, enticing atmosphere of our prairies.

For nearly four days prior to this convention the Board of Governors of the Canadian Dental Association under the able leadership of President Howard J. Merkeley of Winnipeg met in almost continuous session morning, afternoon and evening and as these governors together with chairmen of committees, numbering about forty men, discussed and debated twenty-nine reports representing an immense amount of work by many faithful leaders of our profession throughout Canada, one could not help but feel that the Canadian Dental Association had outgrown its swaddling clothes and had reached mature manhood.

As usual our capable secretary Dr. Don Gullett had made perfect arrangements for the meeting so that everything moved forward smoothly and efficiently. These officers and governors of the C.D.A. are not men who worship the gods of profit, prestige and power but are men who at great personal sacrifice are burning the midnight oil in the interests of their beloved profession and the public whom they serve.

Reports of this meeting will be sent later to every member of the Association and should be perused carefully by all, for every dentist is affected or will be affected sooner or later by the action taken by these governors at their annual conference.

To our new president, Dr. Vernon Fisk of Toronto, we extend our heartiest congratulations and wish for him a most successful term of office.

Our next meeting is to be held in Toronto, May 15-17, 1950, and already plans are underway to make this gathering an event of unusual interest as this is the 75th birthday of Dental Education in Canada. Already the program under the direction of Doctor Charles H. M. Williams of Toronto is well underway. All roads lead to Toronto in 1950.

M. H. G.

ROYAL CANADIAN DENTAL CORPS NEWS

No. 3 Company R.C.D.C. (R.F.), Lieut.-Colonel W. E. Addinell commanding, with headquarters at Edmonton, Alta., has grown, in its short existence, to be the largest Reserve Force dental company, having twenty-one officers attested to date.

* * *

Colonel E. M. Wansbrough, O.B.E., M.M., E.D., Director General of Dental Services, attended the Annual Meeting of the Board of Governors, C.D.A., and the combined Canadian Dental-Western Canada Convention at Saskatoon, June 2-8.

* * *

Colonel C. B. H. Climo, D.C.M., E.D., and Major J. A. MacGowan attended a meeting of the Armed Services Field Medical Material Group, held 23-27 May, 1949, at Brooke Army Medical Center, Fort Sam Houston, Texas. The meeting was attended by many officers of the United States Army, Navy and Airforce medical and dental services. Also in attendance, was Major-General H. J. Higgins, O.B.E., F.D.S., K.H.D.S., Director General of Dental Services, Royal Army Dental Corps.

* * *

Lieut.-Colonel C. L. Strachan of No. 1 Company, London, Ont., Lieut.-Colonel T. J. S. Cooke, No. 6 Company, Winnipeg, Lieut.-Colonel K. C. Berwick, No. 15 Base Company, Montreal, and Major W. R. Stuart, No. 3 Company, Edmonton, visited the R.C.D.C. School on June 2, 3 and 4. The object of the visit was to acquaint Reserve Force Commanding Officers with the C.O.T.C. training program, and to establish contacts between the Reserve Force units and the C.O.T.C. cadets.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

McGill Student Wins War Memorial Prize

Announcement was made at the C.D.A. Annual Meeting that Morton R. Lang of McGill University won the first prize in the War Memorial Award for 1949. The second prize was won by William H. MacNeill of Dalhousie University.

Under the regulation governing the Award each of the five dental schools is permitted to submit three selected essays to the judges for consideration. The subject for the essay is selected by the C.D.A. War Memorial Award Committee and announced to the graduation class of each school well in advance of the opening of the fall term. The subject for 1948-49 was:

"The Relation of the Endocrines to Dental Development and Oral Health."

The winning of these awards is creditable both to the students and the schools attended by them.

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Future Meetings of The Canadian Dental Association

It has been decided to hold the 1950 meeting of this Association in Toronto, May 15-17.

The 1951 meeting will be held in Ottawa, Ontario.

The 1952 meeting will be held in Vancouver, British Columbia.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA

British Columbia Dental Association

During the spring convention of the British Columbia Dental Association, business meetings of the College of Dental Surgeons of this province, and of the Association itself produced much discussion and criticism of the newly established provincial Department of Preventive Dentistry. Briefly, the story would appear to be something like this: The Department of Health and Welfare, having asked for applications for the position of Director of Dental Services for some time in the past, at an absurdly inadequate stipend, and having aroused no interest among members of the profession, recently announced the appointment of an Assistant Director of Preventive Dentistry, in the person of Doctor McCombie, brought directly from England to fill the po-

sition, at a greatly increased salary. It would appear that the increase in salary might have been attractive to local applicants, had they been aware of it. His unfamiliarity with the country and its peoples, together with the lack of contact and co-operation with any established professional body in the province has resulted in some confusion and dissatisfaction. Recent conferences between the Deputy Minister of Health and Welfare, and members of the College of Dental Surgeons and the British Columbia Dental Association have resulted in plans for a close liaison between the Department of Health and Welfare and a strong committee appointed by the Association. It is fervently hoped that this contact may result in harmony and progress along the lines of dental health in British Columbia.

The election of officers of the British Columbia Dental Association revealed the following results:

President—Dr. L. G. Robinson, New Westminster.

President-elect—Dr. J. F. Mercer, Victoria.

Secretary—Dr. L. W. Beamish, New Westminster.

Treasurer—Dr. D. J. Sutherland, Vancouver.

Elected to the Board of Directors—Dr. J. E. Gee, Victoria; Dr. W. G. Newby, Chilliwack; Dr. L. E. English, Kamloops.

Continuing of the Board of Directors are—Dr. L. F. Marshall, Vancouver; Dr. E. L. Jacobson, New Westminster.

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Washington State Dental Convention

The Washington State Dental Convention will receive an invasion of foil clinicians from British Columbia this year. Dr. Oviatt, of Vancouver, and Dr. Cal Foote, of Victoria are listed for Class 111's; Dr. Sutherland of Vancouver, and Dr. Beamish of New Westminster, for Class V's, while Dr. Stibbs, of Vancouver, but presently Professor of Operative Dentistry at Seattle University, will demonstrate a Class II. Another local clinician, Dr. Jacobson, of New Westminster, will present his well and favorably known amalgam clinic. We presume that the State of Washington will also be represented! The convention is a three-day meeting this year, and will probably draw a considerable number of dentists from the lower mainland and the Island.

Vancouver and District Dental Society

The following have been elected officers of this Society:

President—Dr. H. A. Simons.

Pres.-elect—Dr. J. A. Gallagher.

Sec.-Treas.—Dr. E. Nordin.

Directors—Drs. A. Dobbins, S. McQueen, H. Purdy, J. Mc G. Wark.

The guest speaker for the first fall meeting will be Doctor Herman Becks, of the University of California.

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Victoria Dental Society

The final meeting of the Victoria Dental Society elected the following slate of officers for the coming year:

President ..... Dr. C. Usher

President-elect ..... Dr. H. R. Turner

Secretary ..... Dr. J. P. McPherson

Executive Committee: Dr. R. H. McDougall, Dr. Salter, Dr. D. Parfitt, Dr. A. S. Webster.

Dr. McDougall gave a talk on the activities of the Research Council, of which he is a member.

Dr. A. I. Hamilton, of Victoria, who conducted a dental clinic in Caen, France, during violent air bombardments of that town, has accepted a position at the Dental School of the University of Washington.

ALBERTA

Edmonton Dental Society

The regular Summer Monthly Golf Meeting of this Society was held on May 12 at the Mayfair Golf Course in Edmonton. Forty-four members turned out for the golf and steak dinner which followed. A short business session took place immediately after the dinner where the business consisted of making arrangements to visit the Western Canada Dental Convention in Saskatoon. There will be a special car going from Edmonton.

As a result of the golf competition the following were winners of prizes donated by the various dental supplies companies in Edmonton:

1. Low gross score 18 holes winner—Earl Pinch of Ash Temple Co.

2. Low score first 9 holes—Dr. Dunsworth.

3. Low score second 9 holes—Dr. R. Decker and Dr. B. Cameron.

4. The one who lost the most balls—Dr. A. Fee.

5. The one who took the most strokes on one hole—Dr. A. Fee.

6. The cripple who played 9 holes—Dr. H. Brass.

7. The ones who drew lucky numbers at the dinner—Dr. W. Weber, Dr. George Decker, Dr. E. M. Galbraith, Dr. H. Samuels, Dr. G. D. Hawkins, Dr. C. Ward, Dr. T. Hawker, Dr. E. Wilkinson and Dr. A. Olsen.

After the presentation of prizes the members listened with great eagerness and rapture to an address by Colonel W. Hancock, late of the R.C.M.P., who had recently returned from the Orient and who gave us vivid and intimate details of that country.

The speaker was introduced by Dr. W. E. Addinell and was later thanked by Dr. V. Lloyd.

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No. 3 Coy. R.C.D.C. Organized

During this last month, the No. 3 Coy. R.C.D.C. (R.F.) was organized in the province of Alberta with Edmonton as its Headquarters. Dr. W. E. Addinell has been appointed to command the unit and the following dentists are now on its strength:

Dr. R. H. Blaguiere, Dr. R. B. Cameron, Dr. G. E. Decker, Dr. C. G. Duke, Dr. B. J. Eastwood, Dr. A. D. Fee, Dr. D. S. Gilmour, Dr. R. B. Hager, Dr. W. S. Murray, Dr. H. M. McCaffery, Dr. R. A. McEwen, Dr. J. E. Neilson, Dr. A. A. Olsen, Dr. C. W. Olsen, Dr. S. Riskin, Dr. W. R. Stuart, Dr. T. O. Walhovd, Dr. D. I. Culham, Dr. Oatway, Dr. L. W. Irons, and Mr. C. H. Dawe.

The enthusiasm and interest that is shown by the men already connected with the unit augurs well for its success.

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Edmonton Dental Nurses' & Assistants' Association

This Association has now become affiliated with the Western Canada Dental Nurses' and Assistants' Association and also the Canadian Dental Nurses' & Assistants' Association.

As a result of the efforts of the Executive an official pin has been created. This will be worn on the left side of the gown and is a very attractive gold pin, diamond-shaped with the letters of the Association engraved down the front.

SASKATCHEWAN

Regina and District Dental Society

At the last meeting of the season of this Society the following officers were elected:

President ..... Dr. R. O. Brett
Vice-President ..... Dr. H. R. Kerr
Secretary ..... Dr. Harvey Robb

Dr. A. E. Chegwin, Provincial Director of Dental Health, gave an address on the "Long Term Aims and Objects of the Provincial Dental Division." Emphasis was laid on the gradual establishment of mouth health beginning with children age group for the necessary basis.

Dr. Walter Hancock gave a very interesting talk on "Caries Control." A comprehensive picture of this large subject was presented with a summary of past efforts and the approach to the problem through recent investigation and research. The clarity of this presentation demonstrated the speaker's grasp of conditions and the value of the Committee work undertaken in this province. L. H.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

Mrs. Marion Edwards, Toronto delegate to the Western Canada Dental Convention at Saskatoon, was guest of honour at a luncheon Saturday, June 4th at the Marlborough Hotel given by the Executive of the Winnipeg dental nurses and assistants. Miss Kay Hoffard, President, Miss Margaret Kitching, Miss Mary McArthur, Mrs. Hazel Foster and Mrs. Nellie Murdoch attended the convention in Saskatoon, delegates of the Winnipeg dental nurses and assistants. F. JEFFREY

ONTARIO

Board of Governors Ontario Dental Association 1949-1950

Honourary President ..... Dr. A. R. Poag
President ..... Dr. L. M. Grose
Vice-President ..... Dr. D. L. McKerracher
Archivist & Historian ..... Dr. G. V. Morton
Secretary-Treasurer ..... Miss D. Jutton

Public Dental Health Committee — Dr.'s H. A. Swales, R. R. Butler, J. E. C. McGowan, W. J. Dunn, A. W. S. Wood and E. A. White.

Benevolent Committee—Drs. J. A. Bothwell, R. S. Wollatt and Russell Hyde.

Dr. Aimé Coutûre, President E.O.D.A.

E.O.D.A. Convention

The Eastern Ontario Dental Association Convention will be held at the Chateau Laurier Hotel, Ottawa, September 11, 12, 13. For those arriving in the Capital city early on the eleventh there will be a golf tournament in the afternoon and a musical at 8.45 in the evening for members, guests and their ladies.

The program for the Convention proper includes the following list of speakers:

Dr. W. Rand Schram of North Western University—Subject: Oral Surgery.

Dr. Wallace Graham, University of Toronto.

Dr. Geoffrion, University of Montreal — Subject: Orthodontics for General Practitioners.

Dr. H. A. Pearson, Montreal — Subject: Endodontia.

In addition to these well known lecturers there will be Table Clinics, Commercial Exhibitors, a Public Dental Health session, a dance with buffet supper, luncheon address by Mr. Don Henshaw and the usual closing dinner with address from Mr. Mercier and good entertainment.

Members of the Association are urged to make their plans to attend now. Visiting dentists with their wives are cordially invited to join their colleagues in making this Convention the best ever.

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Faculty of Dentistry News
University of Toronto

The names of those who graduated from this Faculty in June of this year are as follows together with a list of prize winners—

Scholarships and Prizes: Albert E. Webster Memorial Scholarship—M. N. Bye; Wallace Seccombe Memorial Scholarship—D. L. Anderson by reversion to M. N. Bye; W. George Switzer Memorial Award—A. C. Robinson; Wallace Seccombe Prize for General Proficiency—A. E. Swanson; Oral Health Theses Prizes: First—G. F. Mumford; Second—J. G. Hall; Dental Students' Parliament Prize—R. E. Cline; H. K. Box Medals, Gold—D. L. Anderson by reversion to G. F. Mumford, Silver —P. K. Takashashi; First Henry Thompson Scholarship—D. L. Anderson; Second Henry Thompson Scholarship — R. H. Finlayson; Academy of Dentistry Prize—G. E. Burgman; Prosthodontia Essay Prize—H. S. Wood.

Honours: Anderson, D. L.; Robinson, W. G.; Bye, M. N.; Finlayson, R. H.; Robinson, A. C.; Williams, J. R.; Compton, F. H.; Trythall, R. H.; Pickering, B. W.; Thompson, W. R.; Mumford, G. F.; Coney, E. A.; Ferguson, H. A.; McKee, R. G.; Swanson, A. E.; Cline, R. E.; Speck, J. E.

Pass: Beck, P. M.; Bilkey, E. G. C.; Brick, J. C.; Brown, M. C.; Burgman, G. E.; Chartrand, H. J.; Clark, J. G.; Cole, M. C.; Cooper, J.; Crowley, L. V.; Derbyshire, J. C.; de Wet, N. P.; Dinniwell, W. A.; Egan, W. G.; Fogel, E. P.; Gelfont, H. L.; Gliddon, J. D.; Goodine, G. R.; Hall, J. G.; Hastings, W. G.; Hicks, A. J.; Hughson, J. E.; Hutzulak, P. O.; Kennedy, E. J.; Kjekstad, B.; Knight, R. S.; Langmaid, J. A.; Lightford, H. G.; Luxford, E. W. P.; Martin, D. A.; Martino, J. J.; Meharry, R. A.; Moran, J. P.; Paquette, E. L.; Parker, D. M.; Phillips, F. J. F.; Pierce, L. R.; Russell, G. C.; Serfontein, H. B.; Shuckett, M. R.; Solomon, E. J.; Takashashi, P. K.; Unger, H.; Urban, A. S.; Vandemark, T.; Vince, R. J.; Weicker, C. M.; Wells, A. E.; Wheatley, A. A.; Whitely, A. R.; Willson, P. E.; Wolfson, L.; Wood,

H. S.; Yampolski, J. L.; Yurkiewitch, W.; Truemner, N. P.

In addition to the above names D. E. Gifford and B. Seetner have successfully completed requirements with the exception of Surgery and Oral Surgery.

In the graduate course of Public Dental Health, the following have received diplomas —Dr. R. A. Connor, Dr. R. S. Langstroth, Dr. H. E. McKenna and Dr. B. J. O'Meara.

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Class in Dental Nursing Graduates

The commencement exercises of the 1949 Class in Dental Nursing were held on June 3 in Convocation Hall, University of Toronto, and diplomas were awarded by President Sidney Smith.

Throughout the past academic session twenty-four young women have been enrolled in the course in Dental Nursing. They were carefully selected from a large number of applicants on the basis of their educational standing, character, and personal and physical fitness for the course.

The curriculum of the Dental Nursing Course is adjusted constantly to keep it in harmony with the changing trends in dental practice, and the graduating dental nurse is therefore well-qualified to give the necessary assistance, and able to adapt herself readily to the office routine of any individual dentist.

The members of the graduating class are as follows: Misses S. E. R. Baker, M. E. Bell, M. L. Donald, D. E. Keen, B. J. Loree, E. V. Mitton, M. J. Riddle, J. M. Scott, N. L. Skey, D. J. Slimmon, H. C. Speck, and B. J. Wilson, all of Toronto; and S. L. Anderson (Dunnville); K. L. Burkholder (Waterford); P. H. Dinniwell (Bowmanville); T. M. Fafard (Gravelbourg, Sask.); I. K. Grainger (Peterboro); E. Mellway (St. David's); J. E. Murray (Orillia); S. M. Prangley (Kirkland Lake); C. A. Riddell (Arvida, Que.); N. I. Rouvinen (Kirkland Lake); F. E. West (Bothwell); and D. I. Wilson (Blackstock). Any dentist interested in employing one of these young women in his office may obtain further information by writing to the Dean, Faculty of Dentistry, 230 College Street, Toronto.

Here And There at The Ontario Dental Convention May 16, 17, 18

It was the eighty-second annual meeting of the Association and as usual it was held this year in the Royal York Hotel, Toronto. President Dr. A. R. Poag of Hamilton demonstrated his ability as a leader as the work of many committees was consummated under the direct supervision of Dr. W. K. Prendergast Convention Chairman. All arrangements without exception seemed to move along with apparent ease and efficiency. The program followed the pattern of recent years and included some activities with appeal to every taste.

As out of town members and visitors arrived during Sunday they soon learned that a social evening had been arranged for their pleasure. This took the form of a musical evening with the Leslie Bell Singers as the guest artists. They provided a delightful program in keeping with the popularity they enjoy wherever they are known.

On Monday morning the early riser found that the Public Dental Health Council of Ontario was having a breakfast meeting with President Dr. Don Johnstone of Niagara Falls presiding. This is a group of public dental health minded dentists from all over the Province who meet once each year to discuss problems and progress of their projects in their own community. Dr. Glenn Mitton presented the report of activities in pamphlet form and then introduced Dr. James Mather, Medical Officer of Health and Director of Halton County Health Unit. Dr. Mather is a young, enthusiastic speaker and presented an excellent message entitled "Prevention of Dental Diseases—A Challenge." Early in his address he gave a definition of Public Health according to Dr. C. E. A. Winslow and in part is as follows—"It is the science and art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts." Dr. Mather stated that he believed dentists were becoming more aware of the need for an improved public dental health and that the public is ready for the needed advances. It was the speaker's opinion that until recent years the approach to the control of dental caries was a negative one in that the role of the dentist was simply to repair and restore teeth rather than anticipate and prevent dental damage. "In most large cities today," he said, "treatment centres are maintained for school children but this is not enough; it does not solve the problem since people still wait for treatment until disease is well established."

The speaker pointed out that a program of public dental health must be approached primarily through education in the value and importance of early and continuous dental care of the child, and that a program based on treatment only is fore-doomed to failure. He added further however that unless treatment facilities are available, no amount of education will accomplish the purpose of getting the child under early continuous dental care.

Before adjournment of the Council meeting, Dr. Harold Beach of Ottawa was elected President for the term 1949-50. Dr. Beach has been chairman of the Public Dental Health Committee of the Ottawa Dental Society and was instrumental in arranging a Dental Health day in the city of Ottawa during the past winter.

As you emerged from this meeting you found members and visitors still arriving and completing their registration. Then they moved off to inspect an enlarged and better than ever exhibitors' display with a special section where many manufacturers were demonstrating the use and application of their products. Soon luncheon time arrived when everyone assembled for the formal opening of the Convention by President Arthur Poag, the invocation by the Honorable Dr. Cody and an address by the Reverend Norman Rawson. Thus the meeting was launched on its way with all its feature attractions.

Of course you cannot see and hear everything that is presented because there is so much going on at the same time, yet as the program unfolded, highlights were observed, impressions made and information given, all indicating current trends of thought and activity in the profession.

Dr. Basil G. Bibby, Director of the Eastman Dental Dispensary, Rochester, N.Y., presented a lecture on fluorine in the prevention of dental caries. He said that fluorination of the water supplies offers some promise of reducing dental caries; that it is relatively an inexpensive procedure; that there are no technical difficulties involved and no health hazards forseen. In regard to the local application of fluorine he said that a 2% solution of

sodium fluoride applied to the teeth in the accepted manner reduced caries incidence about 40%. His suggested technique was a thorough prophylaxis, dry the teeth and apply the solutions for 3 minutes. This procedure is repeated about once a week until 4 treatments have been given. The follow up program includes an examination, a prophylaxis and one application of the solution twice each year. Dr. Bibby cautioned that the dentist using fluorine is not relieved of the responsibility of promoting other preventive procedures such as reducing the amounts of candy, cookies, soft drinks, etc., and the elimination of in-between meal eating habits.

Dr. Charles Williams of Toronto in his paper entitled, "The New Pattern of Dental Practice", gave a nice review of possible preventive measures for the control of dental diseases.

1. Appraise the general health of the patient and if suspicious of a general systemic abnormality consult with the patient's physician.
2. In case of marked susceptibility to dental caries have a diet analysis made. The patient is instructed to fill out a report of all foods and drinks consumed for one week and the report is forwarded to the Preventive Dentistry Department, Faculty of Dentistry, University of Toronto, for analysis and recommendation. These blank report forms are available from the University of Toronto Press.
3. The bacillus acidophilus count is valuable and may be made through a Service provided by the Department of Preventive Dentistry, University of Toronto. All necessary material with instructions will be forwarded on request and the saliva sample obtained is returned to the Department for examination and report.

For the prevention of dental caries reliable detailed instructions for diet control of carbohydrates may be obtained from the University of Toronto Press.

4. If the patient is under 12 years, 4 applications of sodium fluoride may be made at intervals of 3 or 4 days. The solution should be applied to freshly cleaned teeth which have been thoroughly dried. With children over 12 years and adults the possible value of this treatment is questionable at present.
5. The ammoniated dentifrices may be employed with a hope that they might be of some value but with the strict understanding that no real promise can be made at present.
6. For the prevention of periodontal disease Dr. Williams suggested a generally well balanced diet containing among other things whole grain products rather than those from refined white flour. Further, foods should be eaten as much as possible in their natural form preferably from the hand in such a manner as to provide stimulation of vigorous functions to the teeth and supporting structures.

It was very evident from Dr. William's address that he believes dental practice of the future will include increasing application of the principles of dental medicine—measures to prevent the incidence of dental diseases or if that is not too practical at the moment to minimize and control their effects on the physical well being of dental patients until research provides better remedies.

Apropos of this he quoted from an address given by the Honourable Paul Martin at Ottawa, "Now that research is unlocking the secrets of dental diseases, now that the practice of preventive dentistry can save many young Canadians from dental diseases, the achievement or failures of the dental profession will be judged by the generation whose dental health is in its hands."

This is a challenging thought and indicates professional responsibility and the trend toward the goal of progress in a dental science. It is a truth that dental leaders are conscious of this but at the same time they realize that there is a great back log of needed treatment. This must be taken care of in the best possible manner and according to newer concepts and developments. In every profession there are always those willing to share the fruits of their knowledge and experience gained from enthusiastic effort. The Convention this year was host to many such members of our own profession. Here is a list of those who presented lectures—R. J. Godfrey, G. C. Hare and J. B. Pepper, Irving Glickman, Boston; R. G. Knapp, Utica N.Y.,; S. A. MacGregor, G. A. Morgan, C. B. Murto, Washington; M. A. Pleasure,

New York; J. D. Purves, W. D. Clark, J. Kreutzer, G. T. Mitton, D. S. Moore, F. T. Pearson, M. N. Rockman and L. J. Easter.

Each presentation provided information and techniques for the improvement of modern dental service. To this group could be added the names of some 40 other dentists and dental nurses and assistants who prepared table demonstrations thus passing along ideas that have been found useful in their particular office.

Such instruction as these features afford does two things—it profits most those who prepare the lecture or demonstration but it also profits those who listen and observe as they add to their store of knowledge. It is a human frailty to slip away from the optimum standard of quality in service unless one consciously strives to improve. Programs of this nature do much to give the needed opportunity and incentive for raising our sights in providing efficient service thoroughly and meticulously performed.

There was another type of presentation that was quite a feature at this Convention—visual education by motion picture. Enough good films were secured for a continuous program every morning. The names of the films were publicized in the official program with the time of showing. This enabled those interested to be on hand to see the picture of their choice without loss of time.

So much for the more serious aspects of the meeting but some mention must be made of the many functions to provide fun diversion and sociability. There was the usual President's dinner and dance with a good floor show. This was a splendid evening arranged by Mrs. Lloyd Grose and her able committee. The Toronto ladies on behalf of the convention committee were hosts to visiting out-of-town ladies at a dinner party when Edna Jacques, noted poet, lecturer and traveller was guest speaker. While the ladies were thus enjoying themselves the men folk attended class parties and fraternity reunions, where there was ample opportunity for renewing friendships and a lot of good fun. The Dental Corps too had a reunion luncheon where buddies of War days gathered to swap experiences and stories; and finally there was a game of golf at the beautiful Weston Golf and Country Club to close the Convention.

On reflection when you try to review a program of this magnitude and observe in retrospect the co-ordination of so many activities catering to such a great variety of interests, you are amazed at the amount of preparation that must be necessary and all this for the joy of achievement. To President Poag and his many assistants who worked so hard and long goes the gratitude of all who attended the Convention and a satisfaction of a job well done.

T. R. M.

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Gray Bruce Dufferin Dental Association

The eleventh Annual field day of this society was held June 15 in Owen Sound. The program for the occasion was planned about as usual to consist of a round of golf or a cruise on the Bay for non golfers and concluding with a banquet. This year the golfers lost out because of a heavy rain which continued for the afternoon. (Peculiarly enough not a groan was uttered because it marked the end of a long drouth and was very welcome.)

Shortly after 6 p.m. about forty-one members and guests sat down to a grand dinner at the Owen Sound Golf and Country Club with Dr. Roy Blackwell of Kincardine as toastmaster and Dr. Harry Legate of Owen Sound, his secretary in charge of arrangements. Members came from many centres in the three counties —Orangeville, Shelbourne, Dundalk, Markdale, Wiarton, Kincardine, Mildmay, Teeswater, Paisley, Collingwood and a few guests from Toronto together with dental trades representatives and laboratory technicians. Two new members were welcomed to the community, Drs. Milton Bye and Bob McKee both recent graduates from the University of Toronto.

Following dinner there was a period of fellowship in which Dr. Clarence Bebee, representative of the district to the Board of Directors of the Royal College of Dental Surgeons, spoke of his impressions at the recent May meeting. Then Dr. G. H. McKee conducted a draw for the golf prizes where nearly everyone received a prize.

In this way did President Roy Blackwell and his fellow officers bring the activities of the season to a pleasant ending.

During the Winter season the Society held three professional meetings when Dr. R. S. Woollatt, Dr. F. T. Pearson and Dr. R. E. Diprose, all from the Faculty of Dentistry Staff at

Toronto were respectively guest speakers at the meetings.

The new officers for 1949-50 are as follows:

Past President—Dr. Roy Blackwell, Kincardine.

President — Dr. C. J. Baxendale, Owen Sound.

Vice President—Dr. J. A. McArthur, Markdale.

Secretary-Treasurer—Dr. Milton Bye, Owen Sound.

Directors—Drs. E. J. Weiler, Mildmay; J. C. Guthrie, Port Elgin; E. L. Hardman, Wiarton; M. P. Hawton, Collingwood and W. G. Bruce, Kincardine.

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London Dental Society

The annual golf tournament of this association was held at Highlands Golf & Country Club on June 9 with President Dr. C. L. Strachan as master of ceremonies. It was a grand day for the outing and some 75 members and guests took advantage of it for some relaxation, fun and sociability. Guests were present from Windsor, Chatham, Dresden, Sarnia, Watford, Kitchener, Aylmer, Woodstock and Toronto and among the members present, four were given special mention. They were Drs. G. F. Mumford and W. G. Robinson who were members of the recent graduating class at Toronto University and have decided to practice in London and Dr. R. L. Revell of Woodstock, a graduate of 52 years and Dr. George Kennedy of St. Thomas a graduate of 50 years. A very warm welcome was extended these special members by President Dr. Cec. Strachan.

After the golf game everyone assembled for dinner to the skirl of bagpipes with Dr. R. L. Treleaven proudly demonstrating his ability in this connection. After a period of refreshment and good fellowship President Dr. Strachan introduced his committee in the persons of Drs. D. C. McColl, D. C. Stiles, E. R. Dixon, and Allen Millen to arrange for the distribution of prizes to winners in the tournament. Dr. Stephen Moore presented his cup to Dr. F. F. Baker, signifying the best gross score and the best golfer of the day. Dr. E. W. Fuller in the absence of Mr. Charles McKenna presented the McKenna cup to the winner of the best net score, Dr. D. C. McColl. Dr. Fuller did very well pinch hitting for the very popular "Charlie" who has a story for every occasion.

The other prize winners were:
Second low gross—J. B. Clark.
Second low net—M. E. Garrett.
Third low net—J. O. McCutcheon.
Low gross first 9—J. Boyd.
Low gross second 9—J. Johnston.
Low net first 9—E. W. Fuller.
Low net second 9—H. L. Windrim.
Low gross visitors—E. Hackett, Toronto.
Low net visitors—T. R. Marshall, Toronto.
Low gross 22 Handicap—E. A. Reid.
Low net 22 Handicap—R. S. Freele.
High Gross—John Reed.
High Net—Frank Augor, Toronto.

And so ended another very delightful function sponsored by the London Society and thus was another year of activity brought to a close.

The executive of the society for 1949-50 are Dr. Strachan, Dr. D. C. McColl, Dr. D. C. Stiles, Dr. Harold Dixon and Dr. Allen Millen.

EMPIRE NEWS

GREAT BRITAIN

Medical Service

After a trial of nine months, Britain's universal free medical service, whose operations are being studied by those interested in a similar service in the United States, has definitely come to stay. "If there were going to be any breakdown, we would have had it by now," an official of the Ministry of Health said as the end of the first nine months approached. "That phase has been successfully overcome."

There is no single substantial political or professional group in the country that proposes to abandon the service, fundamentally alter its character or drastically cut its costs. "The best measure of its success," said a supporter of the Labour Government recently, "is that the Conservative party is eager to point out that it was for the health service all the time." A prospective Conservative candidate

for Parliament acknowledged that the health service was the most popular measure enacted by the labour administration and that one of the major problems of Conservative policy was how to make legitimate criticisms of the operations and costs of the service without seeming to attack its objectives.

The only serious questions now being raised about the health service concern its administration, its efficiency and its cost in relation to the national budget as a whole. The cost, which is admittedly higher than the Government had anticipated, has been troubling economists, who fear that the burden of social services assumed by the Socialist Government may be becoming heavier than the national economy can carry. Forty percent of all incomes in Britain are taken for taxes as compared with about 25 percent in the United States, a fact that the Economist calls "fantastic" and "appalling." Roughly one-third of the entire Government budget is expended on social services.

In its recent economic survey the Government stated that the cost of service would be stabilized at the present level and with that the Conservative party is believed to be content. In the forthcoming general election campaign it is expected that the Conservatives will take a new line, emphasizing that the Government by providing a minimum average of medical service for everybody has destroyed the priority once enjoyed by the most needy and that general practitioners who are the principal servants of the system are overworked and underpaid.

In examining the statistics for guidance to the United States, British experts advise Americans to take account of the fact that conditions in the two countries are not necessarily comparable. First, Britain is a small compact country with a dense population that is served by excellent communications and can be easily reached by a community medical service. Second, Britain did not start universal medical service from scratch. As long ago as 1911 free health service had been instituted for lower-income classes and nearly every doctor in the country had been making some contribution to it. The new service was simply an extension of the old to cover the entire population. Third, the political atmosphere for the introduction of the new service was well prepared long in advance. When the Health Service Law was enacted the Socialist Government was in power and all political parties and the medical profession as well were agreed in principle that such a system was required.

Britain's health service is more comprehensive than anything yet contemplated in the United States. It is literally both universal and free. Anyone in the country is entitled to its benefits. No one needs to pay directly for medical treatment. Each working citizen makes a small weekly contribution to the service along with his payments for other social security benefits. The remainder of the cost is paid out of ordinary taxes collected by the National Treasury. — Clifton Daniel, "Free Medical Help in Britain to Stay," New York Times 98:25 April 4, 1949 per Public Health Economics.

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Haemorrhage Following Tooth Extraction: Case For Doctor or Dentist

The Minister of Health has been asked for his views on the duty and responsibility of a dentist in the case of a patient suffering from haemorrhage following dental extractions.

The question arose because a medical practitioner complained that he had been called from his bed at 1.30 a.m. to attend a patient who complained of bleeding from the gums after teeth had been taken out the day before. The doctor thought that the dentist would attend to the patient, but the dentist refused to do so.

Mr. Bevan was approached in the matter by the Warwickshire Health Service Executive Council in whose area the parties practise.— D. Mag. & Oral Topics.

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First Inquiry into Lost Dentures

A Leeds woman who reported that she had lost her false teeth by accidentally throwing them in the fire has caused a four-man committee to be set up by the Leeds Executive Council of the National Health Service.

Consisting of two dentists and two laymen, the committee's duties are to inquire into all cases of lost, damaged and destroyed dentures, and to decide whether the loss is due to lack of care. The case of the burned dentures will be their first for investigation.—D. Mag. & Oral Topics.

Free Dentures For Foreigners

Mr. Blenkinsop, Parliamentary Secretary, Ministry of Health, told the House of Commons that the Government considered the issue of free dentures and spectacles to foreign visitors a small but useful step in securing better relations with other countries.

Mr. Blenkinsop said that the idea that our shores would be invaded by people anxious to obtain glasses, false teeth, wigs and artificial limbs was merely a figment of imagination. The Government could not tell how many foreigners had been treated under the service because they did not discriminate. At a generous estimate the cost of the service to foreign visitors would be about £200,000 a year, and he did not feel that that sum should arouse anxiety.

GENERAL NEWS

Caries Control

Isolation from human saliva of a biologically active fraction which may be effective in the prevention of dental decay, one of mankind's most common diseases, is reported in the May issue of the Journal of the American Dental Association.

The discovery was made by three dentists, Drs. T. J. Hill, Morris Matt, and Sholom Pearlman, and Miss Betty Jane White, bacteriologist, of the faculty of the School of Dentistry, Western Reserve University, Cleveland.

They reported that the extract has been fractionated or separated from the saliva of average persons in the minute quantities of .001 to .004 of one per cent. The extract was obtained in slightly larger amounts from the saliva of persons normally resistant to dental decay.

The scientists said that when the extract was added to a dextrose broth in the proportion of one part to 500, the growth of the acid-producing bacteria known as Lactobacillus acidophilus was stopped completely. Used in lesser amounts, the extract was found to suppress the growth of mouth bacteria over a period of 24 to 48 hours.

To date, the extract has not been tested on humans. In experiments conducted on rats, it was found that injections of the extract tended to interfere with carbohydrate metabolism.

Full significance of the discovery will not be known until further research is completed.

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A.D.A. Launches New Information Program

An expanded informational and educational program to acquaint the public with the basic issues involved in compulsory health insurance has been launched by the American Dental Association.

Recognizing that an uninformed public may unwittingly be swayed by unsupported claims and promises of a health Utopia under government control, the Board of Trustees has urged that all members of the Association participate in the dissemination of factual information to the general public.

The new program calls for the use of all available means of communication. Special pamphlets and brochures suitable for patient distribution now are being prepared and soon will be available to all members of the Association. Special news releases, background material for speeches, radio scripts, recordings, mats, special articles and other material will be available to constituent and component societies.

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Medical Service in Russia

The Ministry of Health of the Soviet Union now is engaged in reorganization the structure of medical service to provide for a wider extension of the group practise of medicine. The Ministry is acting under a decree by the U.S.S.R. Council of Ministers. The aim of the reorganization is to spread group practice even into the remote rural areas, according to Pravda, Communist party newspaper in Moscow.

At the same time Pravda disclosed widespread dissatisfaction with the Soviet medical system. The newspaper said it had received complaints from workers all over the Soviet Union telling of indifference and neglect of their medical needs by physicians and nurses. Also, Pravda discloses, some hospitals and clinics do not have enough diagnostic appa-

ratus, laboratory utensils, chemicals and instruments, and some drugstores lack even the simplest medications and drugs.—N.Y. Times, Jan. 17, 1949—per Public Health Economics.

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New A.D.A. Film Available

It is announced that a motion picture entitled "Getting Ready for the Dentist" may be obtained from the American Dental Association. The film shows how a mother can create a proper attitude in a three-year-old child for the first visit to the dentist.

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Dr. E. J. Ryan Writes Historical Novel

Dr. Edward J. Ryan, of Evanston, Illinois, is the author of "Comes an Echo on the Breeze," published April 11, 1949, by the Exposition Press. A historical novel, "Comes an Echo on the Breeze" deals with Abraham Lincoln's experiences as a twenty-three year old captain of volunteers in the Black Hawk war. Dr. Ryan, son of a Union soldier, spent seventeen years collecting material for his book.—Ill. D. Jour.

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Telephone Dental Course Attracts Seventy Societies

Following announcement by the University of Illinois college of dentistry of its proposed telephone transmitted extension course on "current advances in dentistry," a total of 70 dental societies in 30 states indicated interest in participating. The 70 societies have a combined membership in excess of 13,000.

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Western Canadian Dental Society

At the biennial meeting of this Society held in Saskatoon early in June the following officers were elected:

President—Dr. A. R. Hurst, Brandon, Man.

1st Vice-President—Dr. John W. Clay, Calgary, Alta.

2nd Vice-President—Dr. L. D. Haselton, Saskatoon, Sask.

Secretary—Dr. Clare McInnis, Winnipeg, Man.

Treasurer—Dr. W. F. MacKenzie, Winnipeg, Man.

The immediate past president, Dr. L. J. D. Fasken of Regina, Sask., remains on the Board for two years.

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A.D.A. Program For Dental Health

The late Dr. Carl O. Flagstad, of Minneapolis, Chairman of the A.D.A. Council on Legislation, told members of the House and Senate Committees, that the overwhelming majority of the nation's dentists are opposed to the administration's health insurance bills because they would fail to solve the nation's health problems.

Dr. Flagstad listed six points which the Association believes should form the basis for a sound dental health program for the American people:

1. Expansion of dental research and the use of new preventive techniques as soon as they are demonstrated to be valid.
2. Establishment and expansion of community dental programs to make dental care and dental health education available to every child.
3. Establishment of additional dental facilities in hospitals and health centers.
4. Recruitment of capacity enrollments at all dental schools to increase the number of dentists.
5. Adoption of measures to encourage more dentists to practice in smaller cities and rural areas.
6. Greater use of dental hygienists as auxiliary aids to the profession.

Dr. Flagstad said that dentists are particularly opposed to compulsory health insurance because it would tend to shift emphasis away from preventive procedures to a mass repair program and thus fail to bring about any improvement in the nation's dental health.

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Compulsory Health Insurance

I am opposed to compulsory health insurance because it is pure socialism and because its adoption will make the United States a socialistic state. The issue is not whether compulsory health insurance socializes medicine, but whether it socializes the United States. Of the latter there can be no doubt. The adoption of compulsory health insurance will not mean the immediate end of free enterprise in this

country, but it will fix the time of the end within the foreseeable future. If we are to learn anything from the history of excursions into socialism we need only to look at the history now being made in Great Britain. The road to socialism has no turning; and no steps thereon are ever retraced. We have already taken one or two strides along the road. Compulsory health insurance is the greatest stride yet advocated. Once we take that we are irrevocably committed to travelling the entire distance. It is impossible to retrace the steps we have already taken; but we have this opportunity to brace ourselves and declare, "Thus far, but no farther!" If we do not seize this opportunity for a determined resistance, we shall never have another.

These are not empty warnings of impending disaster. One has only to consult contemporary history and that of the immediate past to be convinced that compulsory health insurance has made a mockery of health care, has increased loss of time and earning power of working people, and has placed heavy burdens upon taxpayers. The United States, the only nation of importance in which free enterprise exists today, is now supporting almost the entire world. If there were no other reason for the United States to guard jealously its free economy, it would be that there is no nation left to support us if and when we adopt the economic practices of those European nations which are now the principal beneficiaries of our system of free enterprise. It seems inconceivable that any American citizen should advocate that the United States adopt a social system characterized principally by its association with European nations, whose standards of living are at a level which would be intolerable in this country. It is interesting to note, too, that the most vocal of the advocates of compulsory health insurance are to be found within departments of the federal government —in theory, but only in theory, servants of the taxpayers, who are using taxpayers' money in this effort to add to the taxpayer's burden.

Opposition to compulsory health insurance is no denial of the necessity for continued improvement in health services. It is unreal to expect improvement in the techniques of health care at a rate more rapid than now obtains. However, the problems of the economics of health care are not yet completely solved. Great strides are being made toward the solution of all of these problems through voluntary agencies; and there is every indication that full success is not far distant.

Voluntary methods have the great advantages of freedom from political control, efficiency and economy of operation never obtained in government agencies, and of forestalling the creation of more and more bureaucracies in Washington. Above all, they leave each citizen full freedom of choice of when, where, and to what extent he shall seek health care.—Paul R. Hawley, "The Right to Choose," Christian Science Monitor 41:2 April 16, 1949, per Public Health Economics.

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Income Survey

Doctors across the nation have a new patient to worry about—their own ailing practice. Scores of medicos interviewed by Wall Street Journal reporters in 12 key cities tell the same story: fewer people in their offices, slower payment of bills, patients deferring checkups and treatment of minor ailments and less requests for x-rays and other special services. Many hospitals note a decided pick-up in free medical clinic traffic and increased preference for ward and semi-private accommodations instead of private rooms.

I've begun to wonder lately whether they're picketing my office, the way business is falling off, comments a prominent San Francisco general practitioner. Not all physicians report a really sharp decline, but a New York City ear, nose and throat specialist reports: "People are beginning to wait until they have something really wrong with them before they go to the doctor. The desire to keep healthy seems to be losing ground to the desire to keep expenses down."

Almost without exception doctors find collecting bills a tougher proposition. A trend to ask for credit and a longer period in which to settle accounts began three or four months ago. Pittsburgh medicos say their patients are beginning to question bills and to demand breakdown into charges for various items. Physicians report more and more people are putting off treatment for minor ailments as well as asking for less elaborate and costly services. One Boston Hospital's backlog of 200 surgical and neuro-surgical cases has been

wiped out; officials attribute that situation to a tendency to defer "elective" operations—the kind that aren't imperative.

When a patient gets a choice between a pill and an x-ray treatment nowadays, says a New York specialist, he usually takes the pill. — Doctors' Ailment, Wall Street J., 133:1 March 7, 1949 per Public Health Economics.

Dentists must recall that what is probably one of the harshest laws of nature still operates: that there is no surer road to extermination than failure to adapt to a changing environment. It is doubtful that dentistry long can maintain its position as an independent health profession in a security-minded nation while supplying its services to only 20 or 25 per cent of the people—including even a smaller percentage of the people's children. — Kenneth M. Easlick, D.D.S., A.M., in Jour. A.D. Assoc. June 1949.

IN MEMORIAM

S. M. Snedden of Edmonton, Alberta, aged 75, died from coronary thrombosis, in Grand Rapids, Michigan, on May 12. Alberta men were shocked to hear of his death.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1900. He first practised with Dr. W. McKay, in Pembroke, Ontario. A short time later, he set up practice in North Bay, Ontario, but later went back to Pembroke and took over Dr. McKay's practice until 1914.

In 1914, Dr. Snedden came to Edmonton and practised here until 1929, when he became the dental surgeon on the staff of the Ponoka Mental Hospital and stayed there until 1941 when he retired. During the war from 1941 to 1945, he went back into harness and practised with Drs. M. A. and D. F. McIntyre in Edmonton, then retired again in 1945.

Since retirement, he had divided up his time between Victoria, B.C., Edmonton, Alberta, and London, Ontario.

Dr. Snedden is survived by two sons. His wife predeceased him in 1945.

The funeral was held in Edmonton on May 18 under the auspices of the Patricia Masonic Lodge of which Dr. Snedden had been a member for many years and during his masonic life, he had attained the high position of Grand Master of the Grand Lodge of Alberta. His cheerful attitude on every occasion among his many friends will leave a gap that will be difficult to fill in his passing. W. E. A.

James Joseph Lonegran of Ottawa, Ontario, aged 65, died suddenly at his home May 25. He was graduated from University of Toronto in 1909 and had practised in Ottawa since graduation.

He was an active member of St. Theresa's Church and was a member of the Holy Name Society and a former member of the Knights of Columbus.

He served in the Dental Corps in World War I.

Dr. Lonegran is survived by his widow, one daughter, and four sisters.

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Ross Thomson Stewart of Hamilton, Ontario, died on May 18 at the age of 42.

Dr. Stewart was graduated from the Faculty of Dentistry, University of Toronto in 1932 and immediately began practice in Hamilton where he continued until his death.

He was a member of the Presbyterian Church; also a member of the Leander Boat Club and Psi Omega fraternity.

He is survived by his widow.

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H. Walter Black of Sydney, Nova Scotia, died May 17. Members of the Cape Breton Dental Association and Rotary Club members attended the funeral in a body, also various civic government representatives and members of the City Parks Commission of which Dr. Black was chairman for many years.

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APERCUS SUR LE FLUOR*

par JACQUES SAMSON, D.D.S., Québec, P. Qué.

Les biochimistes nous révèlent que le fluor est une substance que l'on rencontre en petite quantité, un peu partout, dans le corps humain. L'os en contient environ 0.02 pour cent, quantité qui augmente avec l'âge, l'émail des dents 0.01 à 0.015 pour cent, le sang de 0.027 à 0.075 mg. pour cent. On en trouve des traces dans la salive et dans les autres tissus. Enfin le fluor n'est pas une substance inconnue à notre organisme. Nous savons encore que ces proportions, surtout dans les os et dans les dents, ne peuvent être augmentées indéfiniment sans des conséquences désastreuses. Le fluor est un halogène dangereux à employer: c'est un poison très toxique. Mais le fluor, substance toxique, peut devenir et devient même dans nos mains un des moyens de prévention des plus effectifs.

Dans notre profession, les recherches sur ce corps ont débuté en 1931, lors de la formation de la section dentaire du "Public Health Service" américain. Le Congrès américain d'alors accorde à cette section dentaire un octroi de $2,500.00 pour une étude sur les fluorures comme cause des dents madrées (mottled teeth).

Quelques années plus tard, soit en août 1938, H.-T. Dean, directeur de cette section dentaire, publie un rapport sur les fluoroses, où l'on voit que si le fluor à une certaine concentration peut être la cause des dents madrées, il semble amener en même temps une certaine immunité contre la carie.

Il n'en fallut pas plus pour déclancher les recherches sur le fluor comme moyen de prévention. Imitant les travaux du "Public Health Service," les chercheurs analysèrent les sources d'approvisionnement des aqueducs et trouvèrent un nombre assez considérable de municipalités, dont l'eau contenait du fluor. En 1939, dans l'Etat de l'Illinois, était publié un rapport établissant que les enfants, nés et élevés dans un localité, dont l'eau potable contenait du fluor en petite quantité, n'avaient que le tiers des caries des enfants qui buvaient une eau sans fluor. Ce travail fut suivi de nombreux autres avec des résultats des plus encourageants.

On décida alors de tenter la fluorination artificielle des aqueducs. Cette première expérience eut lieu à Grand Rapids, dans le Michigan, en janvier 1945. Les rapports, que nous avons à date, ne sont pas concluants, et en fait, ne peuvent l'être, puisqu'il est prouvé que le fluor dans l'eau ou les aliments, enfin le fluor ingéré, n'a d'effet que sur la dent en formation. Il nous faudra donc attendre un certain temps avant de pouvoir en juger l'effet. L'exemple de Grand Rapids fut suivi par de nombreuses municipalités américaines et même traversa la frontière. Chez nous, plus exactement à Brantford, Ontario, le fluor est ajouté à l'eau potable dans la quantité prescrite, soit 1 ppm. Nous devrons suivre avec attention les résultats de ces expériences, car, si, comme nous l'espérons, elle s'avè-

*Travail présenté à la Société de Stomatologie, le 17 février 1949.

rent heureuses, nous serons appelés à l'imposer à nos municipalités: nos hommes publics ne sont pas facilement convaincables lorsqu'il s'agit de questions d'hygiène.

Simultanément, avec ces expériences sur l'eau potable, les chercheurs orientèrent leurs travaux sur les effets du fluor en application locale. Cette méthode ne peut, si elle donne des résultats, nous laisser indifférents. Nos patients de tous les jours nous réclament des moyens de prévention et dans bien des cas, malheureusement, nous ne pouvons que leur transmettre les résultats d'hypothèses ou de théories vagues. Le fluorure de sodium n'est certes pas une panacée, mais il nous ouvre une nouvelle voie de prévention comme nous n'en avons jamais connue. Si ce traitement ne devait donner que la moitié du 50% d'immunité contre la carie qu'on prétend qu'il donne, ne serions-nous pas déjà justifiés de nous emballer quelque peu et de nous en faire les propagandistes?

Les recherches sur les applications locales amenèrent tout d'abord l'expression d'une théorie chimique que certaines difficultés de laboratoire n'ont pu prouver jusqu'à date. On sait que le principal constituant de l'émail dentaire est un phosphate de calcium connu comme hydroxyapatite avec la formule $Ca^3(PO^4)^2$-$Ca(OH)^2$. Cette apatite en présence de fluor se change en fluorapatite insoluble $Ca^3(PO^4)^2$-CaF^2.

Ce changement chimique, ou si vous préférez cette hypothèse, semble être prouvée par le changement physique qui se produit dans l'émail. Ces changements physiques sont des faits prouvés par le laboratoire: augmentation de la dureté et diminution de la solubilité en présente d'acides. Des dents, après une immersion de cinq (5) minutes dans une solution de fluorure de sodium, ont démontré une augmentation de leur dureté de 5.1% en moyenne. On obtint des résultats aussi encourageants avec la diminution de la solubilité de l'émail. Je vous exempterai d'une trop longue série de chiffres, mais permettez-m'en encore quelques-uns qui me paraissent nécessaires. Une dent soumise à une faible solution d'acide acétique perd 17.6 de sa dureté, mais si elle est traitée au fluorure de sodium elle n'en perd que 7.1.—Remplacez le fluorure de sodium par le fluorure d'étain et cette perte de dureté de 7.1 baisse encore à 1.7. En effet, Phillips et Swartz, deux professeurs de l'Université de l'Indiana, dans leurs recherches sur le fluorure de sodium ont fait des expériences avec d'autres fluorures et le nitrate d'uranyl. Ils en viennent à la conclusion que la substance qui semble donner à l'émail dentaire le plus de résistance aux acides est le fluorure d'étain, viennent ensuite le fluorure de plomb, le nitrate d'uranyl et enfin le fluorure de sodium. Comme vous le voyez les expériences sont loin d'être terminées sur cette question, et l'avenir nous réserve probablement une substance encore plus effective que le fluorure de sodium.

Les nombreux travaux de laboratoire ont été confirmés par des faits cliniques non moins nombreux; traitement d'un certain nombre d'enfants d'une institution avec un nombre égal d'enfants non traités, comme témoins, les deux groupes ayant un même mode de vie; traitement d'une partie de la bouche avec l'autre moitié non traitée comme témoin. Il serait, je crois, inutile de s'étendre plus longuement sur cette preuve; non revues en débordent. Qu'il nous suffise de dire que ces expériences ont été concluantes: les auteurs nous donnent comme immunité une moyenne de 30 à 50%.

Le fluor peut encore être administré en pastilles, en rince-bouches ou en pâtes dentifrices. Les pastilles, prises à la dose suggérée par McClure de 2 mg par jour, peuvent présenter quelques inconvénients dont le premier, qui nous vient à l'esprit, est celui de l'enfant qui prendrait cette dose dans une localité où l'eau potable contiendrait du fluor hors de la connaissance du dentiste prescrivant. Ces méthodes par pastilles, rince-bouches et pâtes dentrifices, semblent encore douteuses et ne devraient être employées qu'avec de grandes précautions. Car si le fluor peut-être utile comme moyen de prévention, il peut encore être dangereux et même mortel.

D'après S o l l m a n , pharmacologiste

américain, la dose mortelle de fluorure de sodium pour les mammifères est de ½ gm. par kilogramme de poids, lorsque pris par la bouche. On donna donc à un certain nombre de cobayes le double de cette dose pour s'assurer de son efficacité: les animaux moururent en dedans d'une heure. On administra par la suite à d'autres cobayes la même quantité de fluorure de sodium avec une partie égale de carbonate de calcium et une demi-partie d'oxyde de magnésie. Après deux heures, la plupart des animaux étaient normaux et mangeaient gloutonnement. L'expérience fut renouvelé en doublant le carbonate de calcium mais en omettant l'oxyde de magnésie: les résultats furent les mêmes. Ceci établit donc la valeur du calcium ou du magnésium comme antidote effectif et reflète encore les possibilités de l'emploi des fluorures dans les dentifrices en rendant leur toxicité inoffensive, même s'ils sont ingérés en petite quantité.

McClure, de son côté, a calculé qu'un enfant buvant de l'eau contenant du fluor dans la proportion de 1 ppm., prend en moyenne entre 1 à 1.5 mg de fluor, par jour, tant par les aliments que par l'eau ingérés. On a trouvé, en effet, que la quantité de fluor des aliments étaient la même dans tous les Etats-Unis. Or, la dose mortelle pour les humains est établie à environ 4 gm., la dose toxique aux environs de 228 mg. Si l'on considère que 88% du fluor ingéré est éliminé par l'urine et 8% par les selles, l'ingestion quotidienne de 1 à 2 mg de fluor ne peut être considérée comme un danger.

H.-C. Hodge nous apprend encore qu'un verre à eau, soit huit onces, d'une solution à 2% de fluorure de sodium est mortel pour l'homme; pour un enfant de 75 lbs. un demi-verre est fatal. Et comme cet auteur fait remarquer: "aussi longtemps que ces solutions seront contrôlées par le dentiste, on ne peut craindre les empoisonnements; mais si on les tolère dans les pharmacies familiales, des accidents mortels s'ensuivront certainement."

Il ressort donc, pour le moment, que les deux principaux moyens d'emploi du fluorure de sodium qui peuvent nous intéresser sont:—soit dans l'eau de nos aqueducs, soit en application locale. Comme nous l'avons dit plus haut, il nous faudra attendre une dizaine d'années avant de connaître les résultats de cette fluorination artificielle de nos aqueducs. Actuellement, le procédé le plus au point est, sans contredit, l'application locale. Sa technique en est très simple: il nous faut d'abord une solution à 2% de fluorure de sodium, certains auteurs recommandent que cette solution ait un pH de 4. La nécessité de ce degré d'acidité ne semble pas encore prouvé. La première application, et seulement la première, est précédée d'une prophylaxie. Isolement et assèchement des dents et application de la solution. Cette solution, et c'est le point le plus important de cette technique, doit rester en contact avec la dent pendant quatre (4) minutes. En effet, les expériences faites semblent confirmer que le temps total d'application les plus efficace est de seize (16) minutes, c'est pourquoi l'on recommande quatre (4) applications de quatre (4) minutes chacune. Les trois autres applications se feront à intervalle d'une semaine et de la même manière, sauf bien entendu comme nous l'avons dit, qu'on omettra la prophylaxie faite à la première application.

Quand devons-nous faire ces applications? Il est un principe établi que nous devrons toujours utiliser comme guide: si le fluor en ingestion n'a d'effet que sur la dent en formation, par contre, en application locale, il n'a d'effet que sur la dent jeune, fraîchement poussée. Vous comprendrez alors qu'il est difficile d'avoir une règle rigide, de fixer un âge défini; certains enfants ont une poussée dentaire hâtive, d'autres tardive. Comme base, afin de traiter les dents peu après leur éruption, on nous recommande de faire trois traitements. Le premier après la poussée des incisives et molaires de six (6) ans, soit environ à l'âge de sept (7) ans, le deuxième après la poussée des prémolaires et canines, vers les dix (10) ans, et enfin le troisième, vers les treize (13) ans, après l'éruption des molaires de douze (12) ans. On préconise même

l'application à l'âge de trois (3) ans sur les dents temporaires.

D'application facile, le fluorure de sodium est peut-être une des grandes découvertes dentaires de notre temps. Son grand défaut est probablement de ne pas exiger un appareillage élaboré, une technique compliquée. En effet, s'il lui eut fallu cet appareillage auquel nous sommes un peu trop habitués, cette technique eut été assurée d'une plus grande publicité. Il demeure, par contre, que ce moyen de prévention nous impose le devoir de l'appliquer à nos patients, d'en faire bénificier la génération montante.

La section dentaire du "Public Health Service" américain, dont je vous parlais au début, a compris la nécessité de faire connaître aux dentistes pratiquants les nombreux avantages que le public peut retirer du fluor. A sa requête, le Congrès américain lui octroyait, le printemps dernier, un montant d'un million de dollars dans le seul but d'établir dans chaque Etat des centres de démonstration d'application locale de fluorure de sodium. Ces centres serviront à populariser l'emploi du fluor et à en démontrer la technique aux dentistes et aux hygiénistes. Déjà, en décembre dernier, trente-deux Etats en réclamaient l'établissement dans leur territoire. On ne peut s'empêcher d'admirer, sans réserve, le magnifique travail fait chez nos voisins. Puissions-nous toujours en profiter!

BIBLIOGRAPHIE

MITCHELL, P.-H. 1946. "A text-book of Biochemistry," McGraw-Hill Book Co.

FORSYTH, Bruce D. 1948. "The Public Health Service has an anniversary." J.A.D.A. 37: 266 (September).

"DENTAL CARIES and FLUORINE." American Association for the Advancement of Science. Lancaster, Pa. 1946.

JAY, Philip. 1946. "Fluorine and dental caries." J.A.D.A. 33: 489 (April)

ARNOLD, F.A. jr. 1948. "Fluorine in drinking water: its effect on dental caries." J.A.D.A. 36: 28 (January).

PHILLIPS, Ralph W. and SWARTZ, Marjorie L. 1948. "Effect of fluorides on hardness of tooth enamel." J.A.D.A. 37: 1 (July).

SMITH, RUSSELL R. and SHANER, Edward O. 1944. "Effects of buffered lethal doses of fluoride on guinea-pigs." J.A.D.A. 31: 1483 (November).

HODGE, Harold C. 1948. "The toxic effects of fluorine." Oral Health 38: 852 (December).

KNUTSON, John W. 1948. "Sodium fluoride solutions: technic for application to the teeth." J.A.D.A. 36:37 (January).

SCHEELE, Leonard A. 1948. "A forward look at dentistry." J.A.D.A. 37: 627 (December).

HARGROVE, T.-A. and BULL, F.-A. 1947. "Fluorine and the deciduous teeth." J.A.D.A. 34: 32 (January).

52, rue S.-Jean
Québec, P. Qué.

Nous avons l'honneur d'informer nos confrères que les

XXIIIes JOURNEES DENTAIRES DE PARIS

auront lieu du Mercredi 23 au Dimanche 27 Novembre inclus.

Le Comité d'Organisation est ainsi composé:
Président d'Honneur: Dr L. FRISON
Président du Comité: M. Henri VILLAIN
Vice-Président: M. PELLETIER-DUTEMPLE
Secrétaire général: M. Robert DUPONT
Secrétaire général adjoint: M. R. RIGOLET
Trésorier: M. R. IBOS
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Secrétaire des Séances: MM. RIVAULT & ROLLAND

Cette manifestation sera organisée par le Groupement de l'Ecole Odontotechnique de Paris et le Groupement de l'Ecole Dentaire de Paris.

PAGES EDITORIALES

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Evaluation des incapacités dentaires

Le dentiste est souvent appelé à donner son opinion professionnelle pour l'évaluation d'une incapacité résultant d'un accident subi au travail ou en dehors de l'occupation habituelle.

Lorsqu'une blessure est guérie et que les organes perdus ont été restaurés, la tâche du dentiste n'est pas terminée, dans les cas d'accident. Il lui reste à fournir au juge l'indication nécessaire pour réparer pécuniairement le dommage occasionné par l'accident—mutilation, infirmité, difformité. Le dentiste doit donc préciser quelle diminution le blessé a subie dans sa capacité ouvrière.

Les litiges naîtront surtout de divergences d'appréciation sur la gravité des blessures, la nature et le degré des incapacités, qu'elles entraînent. Certes, pour résoudre ces problèmes, le magistrat conserve son indépendance, mais le médecin, le chirurgien, le dentiste, l'homme de l'art, en un mot, est devenu son auxiliaire, son guide le plus précieux.

Le droit moderne offre le spectacle d'une collaboration chaque jour plus intime entre la science et la loi, entre le juge et le technicien, le juriconsulte et l'expert. Cette évaluation est essentiellement subjective. Elle dépend de nombreux facteurs dont les principaux sont l'âge, le sexe, l'intelligence, la santé et la qualité du blessé. Ce sont là des appréciations que, dans la plupart des cas, les magistrats peuvent facilement porter. Mais il en est d'autres, qui sont plus spécialement du ressort du dentiste.

Cette forme d'activité professionnelle est mal connue, en général, des praticiens, qui peuvent difficilement juger, en termes légaux, des compensations légitimes exigées par la perte d'une partie ou de la totalité d'une fonction dentaire.

Il existe une technique toute spéciale pour l'évaluation des incapacités temporaires ou permanentes. Nous pouvons résumer brièvement la marche à suivre dans l'accomplissement de cette fonction. Elle comporte d'abord l'examen du patient—histoire de cas, examens objectif, subjectif, radiologique, etc. Ensuite, la coordination de toutes ces analyses, sous forme de conclusions. Enfin, l'évaluation des incapacités temporaires et permanentes, totales ou partielles, basées sur le coefficient professionnel de l'individu et sur une variété de facteurs personnels, qui se présentent dans chaque cas particulier. Ces appréciations sont faites d'un chiffre précis, quand il s'agit de traitements possibles, de nature à améliorer l'état d'un malade. Encore faut-il que ces chiffres soient basés sur des honoraires officiels reconnus par la jurisprudence, la Commission des Accidents de Travail ou des organismes gouvernementaux, tels le Ministère des Affaires des Vétérans, etc., honoraires sujets à des variations locales ou circonstancielles.

L'évaluation des incapacités incurables, comme la perte des dents, par exemple, (des prothèses peuvent être confectionnées, il est vrai, mais un appareil, même excellent, ne peut être considéré comme réalisant la "restitutio ad integrum"), peut être accomplie en se basant sur les taux donnés par des auteurs reconnus comme des autorités dans ce domaine. Ces évaluations ne se font jamais en chiffres précis, mais par un pourcentage basé sur le coefficient occupationnel.

La plupart des auteurs français ou américains, que nous connaissons, accordent au système dentaire une place assez restreinte dans leurs estimés de l'incapacité temporaire ou permanente, partielle ou totale. C'est pourquoi, nous aimerions voir la publication d'un manuel d'évaluation d'incapacité dentaire détaillée, couvrant tous les cas possibles d'accidents aux maxillaires, à la face et aux dents.

Ce service doit être rémunéré, puisqu'il comporte un examen minutieux du malade (radiographies, confection de modèles d'étude, etc.), la consultation d'auteurs spécialisés sur ces questions, la rédaction d'un rapport d'expertise et la production et la justification de cette opinion devant les cours de justice, si cela est nécessaire. L'expertise, dans le domaine dentaire, comme dans les autres spécialités médicales, repose sur des principes et des normes, qu'il faut suivre pour donner à ces rapports un degré d'uniformité relative et de compréhension légale.

Nous souhaiterions voir nos facultés donner à nos étudiants des notions précises sur cette fonction, que le dentiste contemporain est appelé à remplir plus souvent, à cause de la multiplicité des accidents de toutes natures et et du développement progressif des systèmes d'assurances de toutes sortes.

GERARD DE MONTIGNY

Dans le Monde Dentaire

Elèves finissants à l'Université de Montréal.

Quarante-cinq nouveaux dentistes ont fini leurs études à la fin de mai. On lira ci-après leurs noms et les endroits, où ils comptent établir leurs cabinets: Amyot, Yvon, Joliette; Baril, Gilles, Montréal; Béique, Claude, Montréal; Bellavance, Joseph, Rimouski; Belzile, Hector, Chicoutimi; Bérard, Azellus, Marieville; Bernier, Pierre, Québec; Cantin, Yves, Rawdon; Casaubon, Jacques, Canton de l'Est; Chesnay, Gaston, stage d'études à l'étranger; Cloutier, Rosaire, Trois-Rivières; Comeau, Julius, Saulnierville, N.-E.; Comeau, Lin, Kentville, N.-E.; Cormier, Guy, Shawinigan; Couture, Raymond, Mégantic; Desbiens, Philippe, Dolbeau, Lac S.-Jean; Dupont, Robert, Verdun, Montréal; Gagnon, Maurice, Lac S.-Jean; Gaudet, Edmour, Prince-Albert, Sask.; Gobeil, Marc, Grand'Mère; Gourdeau, Maurice, Québec; Jinchereau, Claude, Québec; Lachapelle, Yvan, Montréal; Larue Perrault, Amqui; Laurin, Armand, S.-Boniface, Manitoba; Leduc, Gilles, Montréal; Létourneau, Anicet, Gaspé; Maillet, Lionel, Bouctouche, N.-B.; Marineau, J.-Jacques, Rouyn; Massicotte, Gérard, Joliette; Matteau, Jacques, Grand'Mère; Monette, Jean-Paul, stage d'études à l'étranger; Morin, Roger, Limoilou; Paré, Marius, S.-Marc des Carrières; Pasieka, Jean, Edmonton, Alberta; Patenaude, Alcée, Armée; Perreault, Léo-Paul, Québec; Poirier, Félix, Shédiac, N.-B.; Poirier, Guy, S.-Hyacinthe; Routhier, Jacques, East-Angus; Rozensztejn, Dan, Alberta; Sylvestre, Jean-Paul, Montréal; Taillon, Gérard, S.-Jérôme; Touchette, Gérald, Verdun.

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Prix de fin d'année, à l'Université de Montréal.

La collation des grades de la faculté de Chirurgie Dentaire de l'Université de Montréal a proclamé les prix de fin d'année suivants:

Médaille du Lieutenant-gouverneur de la Province de Québec, offerte au 1er de la classe des finissants, qui obtient plus de 80% des points: Jean-Paul Monette, 86.6%. Prix offert par le docteur Eudore Dubeau ($30.00) à l'étudiant, qui a le mieux réussi ses études théoriques, durant les quatre années du cours: Jean-Paul Monette, 89.2%. Prix offert par l'Association Dentaire Franco-Américaine ($25.00), à celui, qui se classe deuxième: Félix Poirier, 83.2%.

Prix offert par le docteur A. C. Voisard ($10.00), à l'étudiant, qui se classe premier en Chirurgie: Edmour Gaudet.

Prix "Mémorial Théo. Coté" ($10.00), à l'étudiant, qui a le mieux réussi en Couronnes et Ponts: Edmour Gaudet, 83.7%.

Prix "Nolin", ($15.00), offert à l'étudiant, qui se classe premier en Dentisterie Opératoire: Jos. A. Bellavance, 83.5%.

Prix de la Banque d'Epargne de la Cité et du District de Montréal ($10.00), pour l'ordre: Jacques Routhier.

Prix du Collège des Chirurgiens-Dentistes de la Province de Québec: Claude-Marthe Béique.

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Honneur à l'un des nôtres.

L'International College of Dentists vient de conférer au docteur Armand Fortier le titre de "fellow", en reconnaissance des services innombrables, qu'il a rendus à la profession dentaire dans le domaine de l'organisation. An sait que ce distingué confrère, depuis de nombreuses années, se dévoue sans compter comme gouverneur du Collège des Chirurgiens-Dentistes de la Province de Québec et que, dans le passé, il a joué un rôle important au sein de l'Association Dentaire Canadienne.

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Honneur posthume pour le docteur Joseph Nolin.

Lors de la collation officielle des diplômes de doctorat aux étudiants finissant à la faculté de Chirurgie Dentaire de l'Université de Montréal, le président du Collège des Chirurgiens-Dentistes de la Province de Québec, le docteur Ephrem Vinet, a remis à la famille du docteur Joseph Nolin, co-fondateur de la Faculté et décédé il y a environ un an, le certificat de membre honoraire de l'Association Dentaire Canadienne. Ce titre avait été octroyé au docteur Nolin, par l'A.D.C., pendant que celui-ci vivait encore et devait lui être remis officiellement à la réunion générale de l'A.D.C., à Murray Bay, au mois de juin dernier.

Les membres de la famille du regretté disparu étaient présents à cette cérémonie posthume. Le docteur Ernest Charron, doyen de la Faculté prononca quelques paroles pour souligner le rôle éducateur du docteur Nolin. M. Jean Nolin, fils de l'ancien vice-doyen, remercia pour l'honneur, dont son père était l'objet.

On lira plus bas le texte de l'allocution de présentation du docteur Ephrem Vinet:

"C'est pour moi un devoir à la fois très doux et très triste de vous remettre le certificat de membre honoraire de l'Association Dentaire Canadienne décerné à notre vieil ami, notre maître à tous, le docteur Joseph Nolin, par le comité exécutif de l'Association et émis le 24 juin 1949, sans avoir pu lui être présenté avant sa mort.

Si le docteur Nolin était ici présent, aujourd'hui, il apprécierait, j'en suis convaincu, à sa juste valeur, ce témoignage d'estime et d'admiration, ce gage de reconnaissance de toute la profession dentaire.

C'est en effet, sachez-le bien, un fait très rare dans les annales de l'Association Dentaire Canadienne que la remise d'un certificat de membre honoraire.

Notre grande Association professionnelle a voulu ainsi reconnaître les exceptionnels mérites du docteur Joseph Nolin qui fut, du reste, l'un de ses plus éminents présidents.

Notre bon docteur a profondément laissé sa marque parmi nous et il n'est pas du reste, je le crois très sincèrement, un seul dentiste parmi ceux de ma génération et parmi un grand nombre même de nos anciens et de nos cadets qui n'ait été son élève et qui n'ait appris infiniment de lui.

Il fut, en effet, le type même du grand professeur, animé à la fois d'une soif jamais rassasiée de connaître et d'apprendre, et du désir sans cesse grandissant, de la volonté constante d'enseigner, à son tour, ce qu'il savait aux jeunes qui se confiaient à lui. L'un des fondateurs de l'Ecole Dentaire, il en fut l'une des plus nobles illustrations et le serviteur passionné de l'art dentaire sous tous ses aspects.

En un temps où l'on en parlait fort peu, le docteur Joseph Nolin fut un pionnier de l'hygiène dentaire et de la prévention. Pour répandre dans le grand public cette science, car c'en est une, de l'hygiène dentaire, de la prévention des affections dentaires, il ne ménagea ni sa peine ni son temps. Pour y parvenir, il mena sans relâche et tant que durèrent ses activités, d'innombrables campagnes qui, aujourd'hui encore, ne peuvent pas être dépassées, mais seulement poursuivies, imitées.

Monsieur Nolin, non seulement les dentistes, mais encore le grand public en général doivent infiniment à votre si regretté Père.

Je veux souligner, en terminant ces quelques mots, la haute valeur intellectuelle dans tous les domaines du docteur Joseph Nolin, Ce fut réellement un humaniste au sens le plus complet du mot et rien ne le laissait indifférent dans le champ le plus vaste de la pensée. Amoureux des sciences, il l'était pareillement de la poésie et de la littérature en général et son savoir nous réservait toujours les plus étonnantes et agréables surprises. Il n'était étranger à rien et rien non plus ne le lui était de l'oeuvre des Hommes.

Je vous remets donc avec un grand plaisir ce certificat, Monsieur Jean Nolin, ainsi qu'à tous les membres de votre famille, qui y verront une marque nouvelle de l'estime, de l'admiration, de la reconnaissance et de l'affection, dont était entouré si justement celui que nul jamais ne remplacera parmi nous, le docteur Joseph Nolin."

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Enquête sur la santé.

Un des nombreux octrois fédéraux mis à la disposition des provinces est connu sous le nom d'Octroi pour l'Enquête sur la Santé. Le but de cet octroi est de procurer à chaque province les moyens de faire un enquête sur les facilités existantes de santé et de faire des recommandations pour leur amélioration. Ces deux considérations sont mentionnées d'une manière spéciale dans l'ordre-en-conseil du Gouvernement fédéral.

Les provinces ont, à leur tour, passé des ordres-en-conseils pour constituer des comités, qui s'occupent de ces enquêtes. La façon de procéder varie quelque peu dans chaque province, mais les enquêtes se font et seront complétées cette année. La dentisterie devra être représentée convenablement sur chacun des comités provinciaux. Des renseignements précis sur la chose dentaire devraient être couchés sur papier. Il y a là une chance pour nous de faire des recommandations pour l'avenir. Des argents sont disponibles pour procéder à une enquête complète. Dans le do-

maine dentaire, tous les aspects devraient être étudiés, personnel, éducation, santé publique, hôpitaux, distributions des services, et tous les à-cotés se rapportant à la dentisterie, en tant que profession s'occupant de la santé.

En temps et lieu, ce rapport sera publié et il devrait donner une directive en vue de l'amélioration possible de la santé du public au cours des années à venir. Il est nécessaire que la dentisterie occupe une position convenable dans ce rapport. Si l'expérience des dernières années peut se porter garante de l'importance de la dentisterie, en tant que profession s'occupant de la santé en général, il est temps que ce rapport en fasse mention.

Quand ces octrois furent annoncés, nous avons demandé aux organisations dentaires provinciales d'appointer des représentants au sein de l'organisme central de la province. Dans certaines provinces, une représentation adéquate fut incorporée dans ce comité central. Dans d'autres, un sous-comité dentaire à été organisé pour éclairer l'organisation centrale. Peu importe l'arrangement, qui a été fait, il est d'une extrême importance que ceux, qui ont été chargés de cette tache, soient conscients du sérieux de leur besogne. Seuls des dentistes peuvent évaluer à leur valeur les facteurs, qui régissent les services dentaires.

L'arrangement des services de santé dentaire, pour l'avenir, est extrêmement important.

Parmi les recommandations probables, on trouvera certainement:

1) Des besoins au sujet du personnel.
2) Distribution du personnel.
3) Facilités pour l'éducation dentaire.
4) Programmes de santé dentaire pour le public.
5) Question des services hospitaliers.

Université de Montréal

Faculté de Chirurgie Dentaire—Cours Gradués et Postscolaires—1948-1949

Endroits	Chirurgie	Diagnostic	Endodontie	Orthodontie	Prothèse
Québec	12	1	4	3	13
Ontario	16	—	—	1	7
Manitoba	2	—	—	—	—
Saskatchewan	1	—	—	—	2
Nouvelle-Ecosse	2	—	—	—	—
Nouveau-Brunswick	1	—	—	—	2
Etats-Unis	1	—	—	1	—
Haiti	1	—	—	1	—
Belgique	—	—	—	—	2
TOTAL	36	1	4	6	26

Soixante-treize (73) élèves ont suivi ces cours.

La question d'assurance-santé, aux Etats-Unis

Le 1er décembre 1948, au cours d'une séance tenue à huit-clos, le Bureau des Délégués de l'Association Médicale Américaine a décidé d'imposer une cotisation spéciale de $25.00, à chacun des membres de l'Association, pour combattre le projet d'assurance-santé du gouvernement américain. L'Association Médicale Américaine est catégoriquement opposée à toute loi d'assurance de santé obligatoire. Le résultat imprévu de l'élection présidentielle a paru à plusieurs comme une approbation de la politique démocrate sur la question d'assurance-santé. On est actuellement à préparer un bill dans ce sens pour sa discussion devant la prochaine session du Congrès, qui doit s'ouvrir en janvier. Les dirigeants des associations médicales et dentaires sont en train d'unir leurs forces pour faire front commun contre cette loi, qui doit être présentée prochainement.

Il est prévu que le remaniement ministériel à Washington amènera la création d'un nouveau département, qui sera appelé "Secrétariat des Relations Humaines" et il est probable que M. Oscar R. Ewing, présentement administrateur de la sécurité sociale, sera nommé chef du nouveau ministère. M. Ewing, récemment, a remis un rapport au Président intitulé "La Santé de la Nation," dans lequel, il disait: "Nous sommes prêts à réaliser le programme de santé le plus compréhensif jamais offert au peuple des Etats-Unis . . ."

A la réunion annuelle du Bureau des Délégués de l'Association Dentaire Américaine, en septembre dernier, à Chicago, il a été décidé de s'opposer au programme de santé obligatoire et de contrecarrer le rapport de M. Ewing, dans lequel il recommande l'adoption de l'assurance-santé obligatoire. La situation actuelle aux Etats-Unis motive la déclaration du Dr Carl O. Flagstad, président du Comité de Législation:

"Les résultats de l'élection, malheureusement, ont donné naissance à un esprit de défaitisme au sein de la profession en rapport avec la mise en force d'une législation d'assurance-santé. Cette attitude nuit au succès de notre cause et n'est pas justifiée par les expériences du passé touchant des projets de loi de cette nature. L'opposition des professions s'occupant de la santé des populations à cette assurance de santé obligatoire, qui est déjà à l'étude devant le Congrès depuis dix ans, a exercé une influence considérable sur les Congressistes . . . Quoique le Gouvernement ait clairement indiqué qu'il favorise cette mesure plusieurs congressistes se sont prononcés contre ce projet de loi. Ceux-ci n'accepteront pas cette philosophie de la coercition . . . Il y aura certainement du tumulte au cours de la 81ième au sujet de cette question, mais notre cause est loin d'être perdue." Note: On peut obtenir la copie du Rapport de Oscar R Ewing, en s'adressant au Surintendant des Documents, U.S. Printing Office, Washington 25, D.C. Prix: $1.00.

Lettre aux Gouverneurs, A.D.C., vol. no 7.

Note de la rédaction: Durant le mois de décembre, M. Oscar R. Ewing, administrateur de la sécurité fédérale, a déclaré au cinquième banquet d'anniversaire de l'hôpital Sydenham: "L'heure des messieurs de l'Association Médicale Américaine est passée. Je prédis que leurs $3,500,000 iront à l'égoût. La dernière élection a donné à M. Truman le signal d'avancer; le groupe médical fera bien de le comprendre. 20 pour cent des Américains ont les moyens de se payer quelque chose qui ressemble aux soins nécessaires. 325,000 Américains meurent chaque année parce qu'ils ne peuvent pas se payer de soins."

M. Ewing explique que selon le pro-

jet fédéral d'assurance médicale, le salarié à $50 versera une cotisation de $1 par semaine pour sa famille et lui. La cotisation maximum sera de $1.90 pour les salariés gagnant plus de $4,800 par an.

Enquête sur la profession dentaire

La Société Dentaire Harris de Lancaster, Pennsylvanie a récemment patronisé deux enquêtes, qui furent menées par une compagnie, qui s'occupe d'économie politique. Quoique les articles en jeu ne soit pas nombreux, les réponses indiquent bien les idées du public et des professionnels.

1) ENQUETE SUR LES IDEES DU PUBLIC:

Le but de cette enquête était d'obtenir des statistiques devant servir à un programme éducationnel. Les résultats obtenus sont les suivants:

a) Une majorité de 292 personnes ont dit visiter leur dentiste, tous les six mois.

b) 63% sont d'avis que les honoraires dentaires sont justifiés; 37% pensent qu'ils sonts exorbitants.

c) Presque tous croient qu'il est important de conserver ses dents, de remplacer celles, qui manquent, et que la cavité buccale est en rapport avec la santé en général.

d) 64% pensent qu'un examen dentaire devrait être pratiqué quand un patient est admis à l'hôpital.

e) 94% opinent que les malocclusions chez les enfants devraient être traitées par un orthodontiste.

f) 67% pensent qu'il est important de faire soigner les dents temporaires.

g) La majorité croient que les examens dentaires, dans les écoles, portent du profit.

h) 95% pensent que des cliniques dentaires gratuites devraient être instituées pour les nécessiteux.

i) Les dentistes sont classés cinquièmes parmi les personnages importants de la collectivité, selon l'avis de ceux, qui furent questionnés. Les médecins, les prêtres, les instituteurs et les fermiers sont classés avant les dentistes; les manufacturiers, les travailleurs manuels, les marchands, les banquiers, les fonctionnaires et les avocats sont classés plus bas.

j) 44% n'aimeraient pas un système de paiements à credit pour solder les comptes de dentistes; 31% favoriseraient un tel système; 25% étaient indifférents.

k) 84% sont opposés à l'assurance-santé.

l) 45% pensent que les traitements seraient de qualité inférieure sous un système d'assurance-santé obligatoire; 42% croient que les traitements seraient les mêmes; 13% pensent que les soins seraient meilleurs.

L'âge, le sexe et les conditions pécuniaires des gens questionnés s'établissait comme suit:

SEXE

68% étaient des hommes
32% étaient des femmes

AGE

52% étaient au-dessous de 40 ans
38% étaient entre 40 et 59 ans
10% (3454) avaient 60 ans et plus

CONDITIONS PECUNIAIRES

41% d'un revenu inférieur à $3,000
37% $3,000-$ 5,000
19% $5,000-$10,000
3% plus de $10,000.

2) ENQUETE SUR LES IDEES DES DENTISTES:

Cette enquête fut entreprise pour compiler les opinions et les faits des dentistes et de leur pratique. Les trouvailles suivantes furent amassées:

a) 96% des dentistes possèdent un appareil de radiographie; 20% utilisent leur appareil pour tous les patients; 80% s'en servent selon les cas.

b) 75% des dentistes ont un instrument pour vérifier la vitalité de la pulpe.

c) 53% perçoivent des honoraires pour un examen de la bouche.

d) Tous les dentistes interviewés préconisent l'obturation des dents temporaires.

e) 43% conseillent la rétention des dents temporaires infectées pour servir au maintien des positions pour les dents permanentes.

f) 86% croient que les foyers infectieux dentaires peuvent être un facteur causal pour la fièvre rhumatismale.

g) 81% sont d'avis que les sociétés dentaires locales devraient établir une échelle d'honoraires minima.

h) 56% sont en faveur d'un mode de paiements différés pour les honoraires dentaires; 31% ne sont pas de cet avis; 13% sont indifférents.

i) 93% pensent que les dentistes devraient donner des traitements aux nécessiteux; 28% croient que ces traitements devraient être prodigués dans les cabinets dentaires; 72% préfèrent une clinique.

j) Les dentistes devraient être classés troisièmes, en rang d'importance dans la collectivité, selon les dentistes eux-mêmes; les médecins, les instituteurs devraient être placés plus haut; les prêtres, les fermiers, les manufacturiers, les travailleurs manuels, les marchands, les fonctionnaires, les banquiers et les avocats placés à un dégré inférieur.

L'âge moyen des dentistes consultés était de 38.1 ans; la moyenne d'années en clientèle était de 13.8 ans.

Des quarante dentistes faisant un rapport sur l'impôt sur le revenu, 10 ont déclaré un revenu net inférieur à $5,000, 26, un revenu entre $5,000 et $10,000 et 4, un revenu supérieur à $10,000.

Lettre aux Gouverneurs, A.D.C., vol. 5,

UNIVERSITE DE MONTREAL

Photographie d'un groupe de dentistes, qui ont suivi un cours postscolaire en prothèse, sous la direction du docteur Rudolph H. Schlosser, professeur émérite de l'Université Northwestern de Chicago. P. rangée, de g. à d.: D. D. McIntosh, Alexandria, G. M. Jackson, Hamilton, Rudolph O. Schlosser, L. E. MacLachlan, Ottawa, Arthur Singer, Saskatoon, E. Vinet, Montréal; D. rangée: J. R. Persk, Montréal, C. de Grandmont, Montréal, James B. O'Brien, S.-Jean, N.-B., L. O. Léger, S.-Jean, N.-B., R. Armour, Ottawa, L. A. Stern, Pembroke, R. E. Lussier, Montréal; T. rangée: A. Gaudet, Prince-Albert, J. Lalande, Montréal, J. Nadeau, Montréal, P. E. Berger, Belgique, J. Weiner, Montréal, D. Solomon, Montréal, R. Sarrazin, Montréal, J. Fabien, Montréal.

DR. V. D. CROWE PASSES AWAY

The sudden death of Dr. V. D. Crowe of Truro, Nova Scotia, on July 16, came as a great shock to his many friends throughout Canada.

He was President of the Canadian Dental Association in 1946 and up to the present had continued as one of the governors of our Association. He was also a past president of the Nova Scotia Dental Association and was recognized as one of the dental leaders of Canada.

His loss is mourned not only by his family to whom goes our deepest sympathy but also by his many friends and the dental profession at large.

M.H.G.

GEORGE VERNON FISK, D.D.S., L.D.S., F.A.C.D.

Toronto, Ontario

President of the Canadian Dental Association.

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Past President Great Lakes Society of Orthodontists.

Member American Association Dentistry for Children.

Honorary President Inter-American Orthodontic Congress 1942.

The Journal
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ADDRESS OF THE PRESIDENT*

of the Canadian Dental Association

by HOWARD J. MERKELEY, D.D.S., M.D.S., Winnipeg, Manitoba

ONCE again we mark the passing of a milestone in the life of the Canadian Dental Association. Our history as an organization reaches back to 1902. During this period there have been one or two reorganizations, and while our objectives have not varied, the internal governing arrangement has; until today we have a smooth functioning administration, brought to a high degree of excellence by a capable permanent staff, assisted in some measure by each successive Executive and Board of Governors.

It will be very fruitful for us to even casually examine the status, programs and future plans of our Association, that we may lay even bolder plans for the future and so assume our proper role in a changing world of responsibilities and complexities of health problems.

It is a far cry from the time when dentistry consisted of the more or less, usually more, painful loss of an offending molar; and in the restorative field, its replacement by a simply wired-in number as its successor. Our progress in the art and science of dentistry has marked the invasion of many fields — simply denominated, pathology, bacteriology, histology, anatomy, surgery, anaesthesia and certain others, and now we have arrived at the point where preventive dentistry and research must be our chief concern.

Our field of service has not been over-specialized, yet we in truth can boast of many advances in the specialized fields, starting with the work of Morton and Wells in that of anaesthesia.

Let us for a time discuss the field of dentistry as it presently faces us and consider our present program for the furtherance of our objectives. To do this we must first know how policies are developed.

A large number of committees are elected or appointed each charged with certain definite responsibilities. Their subject under review is examined carefully and a report is presented to the Board of Governors or to the Executive Committee. When presented to the Board of Governors it is referred to another committee for discussion and analysis, and this second committee presents its report to the full Board of Governors. Discussion of both reports ensues and decisions are arrived at and broad policies laid down, that dentistry may develop along proper lines towards fulfilment of its destiny.

Each year has brought its special problem; and may I pay well earned tribute to those who so carefully laid the foundations for our Association in the early days. They served us well; giving unstintingly of their time and funds to keep the young Association operating; paying all their own travel-

*Presented at the National Convention of the Canadian Dental Association, Saskatoon, Saskatchewan, June 8, 1949.

ling expenses and being ready at all times to answer a call to duty that might consume many days. May I also pay tribute to our very excellent permanent staff as well as our Governors and Committee members; these latter too give many weeks of their time in the performance of their allotted tasks.

We are hoping we may soon have a headquarters that will reflect to some degree the importance of our organization, and that will allow us to extend our activities. We are in need of an assistant for our Secretary; preferably one with bilingual capabilities, so that much routine work can be lifted from the shoulders of our Secretary, releasing his time to be used in ways more productive of good for our Association. I believe the time has arrived when, using the entrée we now have to various health departments and associations, we should with great credit to our Association make more frequent personal contacts with them through our Secretary. The passing of the years has brought newer and knottier problems to be solved, but this is a healthier sign, denoting vigorous growth and a willingness to assume proper responsibilities.

Those charged with the production of our Journal have a never ending task. Month in and month out they have faced mounting costs of publication and many other problems peculiar to the publishing field; their burden has increased year by year as have their responsibilities. We are proud of the place our Journal has attained in its field, and must pay well earned tribute to the editorial staff headed by our beloved co-editors—Harry Garvin and Gerard de Montigny; but recognizing that this is not enough, means must be found in the near future for a more equitable distribution of the burden and for a considerably more liberal financial arrangement. This is only one of many reasons why the dentists across Canada must accept the responsibility for greater financial support of the C.D.A.

All contacts of our profession with Federal and Provincial Health Departments have been very cordial and frequent requests have been received by our office from them, for advice and comment upon health matters. Various committees and delegations have also upon request met Federal department officials with beneficial results. It is our hope that these cordial relations will long continue to the definite benefit of the public and our profession.

Three problems are now our chief concern. First may I briefly refer to what is commonly called socialization of dentistry. For any Government dental health program the policy of the C.D.A. as enunciated has been to stress the extension of dental treatment to certain of the younger age group, and gradually include older groups; stressing meanwhile the necessity for preventive education and treatment. So I believe we should continue and even extend wider our support for courses in dentistry for children from coast to coast. This must be our chief effort if we are to assume our place as a health organization.

Laboratory technicians have in too many cases widened their scope of activities far beyond their legitimate field, and I would suggest the Provincial Boards be urged to correct this situation, possibly by the prescription plan.

For some time various magazines have carried articles on dentistry. Many were very misleading to say the least; others dealing with certain phases of research work were too enthusiastic. This whole matter has been very fully discussed by our Public Relations Committee, and each individual case has been handled in a way entirely satisfactory to the Board of Governors and, as well, a general plan for dealing with all future cases has been worked out.

As an example of an excellent public relations article, may I refer you to one on vocational guidance written by our Secretary. It received generous and well earned praise from all

quarters when recently published in the Financial Post, and is one of which our profession may well be proud. Another excellent dental booklet for occupational guidance has been produced by the Alumni Association in co-operation with our Committee on Public Relations. This will shortly be published in both languages and be ready for distribution.

Our Education Committee has been very busy for the past few years seeking to standardize their dental teaching and vary their curricula in desirable ways. They also have made considerable progress looking towards the establishment of a National Examining Board.

We have every right to be proud of our various dental faculties, nearly all of which have within the past year or two had many changes on their faculties including new deans. This year has marked the dedication of a new and very carefully planned building in Edmonton, to be the home of the Faculty of Dentistry of the University of Alberta. We are proud to know that here, with such excellent equipment and under the guidance of a wise, enthusiastic and forward looking faculty of able young men, students may gain an ardent desire to carry forward the highest aims of our profession. Here also research facilities have been provided that this part of their professional efforts may also be advanced. Dean Hamilton merits great credit for his untiring efforts in planning this school.

During the year it was my privilege to visit the dental school of the University of Montreal. Here again I met that altogether charming confrère of ours, Ernest Charron, who very kindly consented to conduct me through his school. It is very, very well planned and equipped, and year by year is giving our profession men of whom we are all justly very proud, and each will carry into our profession marks of contact with Ernest Charron. My hope is that they may each gather some of his geniality, much of his charming manner and understanding good-will.

The problem of the displaced persons with some type of dental education has become of considerable concern. The standards of various grades of dental education in Europe are frequently quite baffling, added to which most of those presenting profess to have lost all their certificates. It is quite difficult to make some Government agencies that need dental personnel see the necessity for a proper screening. It may be advisable to have a dental faculty evaluate the dental education of each D.P. as they apply for employment, and in this way standardize requirements.

Since our last meeting our Secretary has spent some weeks in England observing the operation of their dental treatment scheme, and we now have his report and also a voluminous file of relative material, all of which has been studied by your Board of Governors in an effort to arrive at a point where we may intelligently and wisely suggest some scheme for dental treatment in Canada should the Government decide to embark upon one.

Our profession has no fault to find with a plan that will extend needed dental service, but many safeguards are necessary to see that there is no lowering of standards in reference to work and that research, preventive and educational aspects receive proper attention.

When my good friend Philippe Hamel installed me as President of the C.D.A., last year, I wondered what would be my greatest compensation for my year in office; now I know and freely admit that it has been renewing acquaintances from the Coast to the Island and meeting more of the men and their charming ladies; and experiencing the great thrill of pleasure in realizing this is my land, these people my fellow Canadians and confrères.

As I now relinquish this the highest office in the gift of our Association, may I tell you how greatly I esteem the privilege that was extended me a

year ago, and may I say I very deeply appreciate the honour of having been associated on the Executive, and on the Board of Governors, with such a splendid group of men. It has made me very proud to be a Canadian dentist.

For my successor, my greatest and truest wish is that he may enjoy his term as much as I have mine; and I know he also will receive wholehearted support from all our profession and its officers. I wish him every success.

ANNOUNCEMENTS

Chicago Dental Society Announces Its Ninth Annual Prize Essay Competition

Author of Best Essay in this National Competition Will Receive Cash Award of $500.00

The Chicago Dental Society, to encourage continued scientific research in all phases of dentistry, again offers a cash prize of $500.00 to the author of the most meritorious essay reporting an original investigation and containing new and significant material of value to dentistry.

The winner of the award will be invited to present his essay at the 85th Midwinter Meeting of the Chicago Dental Society to be held in Chicago, February 6-9, 1950 at the Stevens Hotel. Expenses of winner will be paid by the Society and will be in addition to the prize of $500.00.

Any member of the American Dental Association, or of a recognized foreign dental society, or anyone affiliated with a recognized institution in the dental field may apply for authorization to enter the competition.

Application forms and contest rules may be obtained by writing to the Chicago Dental Society, 30 N. Michigan Ave., Chicago 2, Ill. *All applications to participate must be filed in the office of the Society by October* 3, 1949.

Tufts College Dental School

The Division of Graduate and Postgraduate Studies at Tufts College Dental School has announced its schedule for graduate courses for the year 1949-1950. Graduate work leading to a Certificate may be taken in Orthodontics, Oral Pathology, Oral Pediatrics, Oral Surgery, Periodontology, Prosthetics, and Radiology. All courses are designed to meet the requirements of the respective specialty boards. Applicants interested in obtaining the degree of Master of Science may do so by combining their clinical courses with a major endeavour in a basic, dental or medical science.

In addition to graduate work, postgraduate refresher courses are offered in all fields of dentistry. Such courses are given on a one-day per week and on a consecutive day basis. Approximately forty such courses are to be offered starting in October, 1949 and conducted through June, 1950.

For information regarding either the graduate or postgraduate courses address correspondence to

Dr. Arthur H. Wuehrmann
Division of Graduate & Postgraduate Studies
Tufts College Dental School
416 Huntington Avenue
Boston, Massachusetts

Die when I may, I want it said of me by those who knew me best, that I always plucked a thistle and planted a flower where I thought a flower would grow.—Abraham Lincoln.

THE EFFECT OF X-RAYS ON BLOOD TISSUE AND SKIN

by MAXWELL N. ROCKMAN,* D.D.S., B.Sc. (Dent.), Toronto, Ontario

"Be ashamed to die 'ere you have achieved some victory for mankind"—Pasteur

THE first report dealing with the effect of x-ray irradiation upon the blood tissue and skin was made by Senn in 1903 who found that after such treatment a leucopenia was present in the blood stream and that a skin rash and loss of hair developed with excessive irradiation. The following year, Heineke found both a lymphopenia and a neutrophilic leucopenia present in irradiated animals. He briefly described degenerative changes in the haemopoietic tissues following a single irradiation occurring to the greatest extent in the lymphatic tissues, the first cells to be affected being the lymphocytes. These results were confirmed by Aubertin and Beaujard in 1905, Warthin in 1906 and by Lacassagne and Lavedan in 1924, and more recently by Dunlap in 1942 and by Henshaw in 1944. There is a conflict of opinions regarding the effect of x-rays on leucocytes, some (Aubertin and Beaujard in 1905; Linser and Helber 1905; Benjamin, Russ, Sluker and Schwarz 1906; Dunlap in 1942 and Henshaw in 1944) claiming a destructive action, others (Jolly and Lacassagne 1923) a resistant action. There seems to be no doubt that leucocytes of all kind are more easily injured by x-rays than are the red cells and corpuscles.

One comes to the conclusion, in reviewing the literature of this subject, that it is generally agreed that the haemopoietic organs are sensitive to x-rays and that the earliest and greatest effect is in the lymphocytopoietic centres; the erythrocytes are very little affected unless the exposure becomes excessive; the skin becomes covered with a scaly rash and a loss of hair is noted. There is, however, still little unanimity as to the details of the changes occurring in the blood tissues and skin upon irradiation whilst the explanation according to Piney (1928) or Henshaw (1944) is scarcely understood.

The x-ray machine today is being used not only for its penetrating photographic qualities, but also for its therapeutic powers. And in its therapeutic powers may lie the solution to some of the medical profession's most baffling problems as they ponder the perplexities of disease.

This study has never before been attempted by a member of the dental profession, using dental x-ray apparatus and considering the subject from a dental standpoint. Throughout the experiments a Victor C.D.X. dental x-ray unit was used with voltage at 110 and amperage at 10 m.a.s. With a film target distance of 18″ a spread of x-rays 8⅞″ in diameter was obtained. This latter measurement was the approximate length of the guinea pigs which were used for these experiments.

A number of guinea pigs were used. First the normal blood picture was determined by daily microscopic examination of blood smears, over a considerable period of time. Following this, experiments were conducted to ascertain the minimum doses required to show macroscopic reaction on the skin and microscopic reaction on the blood tissue.

Further experiments were also carried out to determine the comparative reaction of continuous small applications of x-rays and periodic larger doses. Considerable data accumulated with daily performance of this work. Notes were also made on the physical

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reaction of the guinea pig during the period of experimentation. Blood counts were taken of all the animals during the period of recovery to determine the time required for them to return to their normal state.

A brief summary of the problems which were undertaken follows:

Problem 1—What is the effect of one large dose of x-rays on the blood tissue and skin? When does its maximum effect occur? When does its effect wear off?

Problem 2—What is the effect of continual exposure of 480 m.a.s. applied daily on blood tissue and skin?

Problem 3—What is the effect of continual exposure of 960 m.a.s. applied every day on blood tissue and skin?

Problem 4—What is the effect of continual exposure of 1920 m.a.s. applied every fourth day on the blood tissue and skin?

Problem 5—What is the effect of continual exposure of 3840 m.a.s. applied every eighth day on the blood tissue and skin?

Problem 6—What is the effect of continual exposure of 7680 m.a.s. applied every sixteenth day on the blood tissue and skin?

While considering these problems, the reactions upon the skin and upon the physical condition of the guinea pigs were noted. A presentation of the experiments individually and in full detail as they were conducted daily follows. First however let me present the comparative haematological picture between human and guinea pig blood. (Table 1).

TABLE 1

NORMAL COMPARATIVE HAEMATOLOGY OF HUMAN AND GUINEA PIG BLOOD

	Human	Guinea Pig
Red Blood cells	5,000,000	6,740,000
White blood cells	6,000	15,820
White blood cells (differential)	Neut. 60-65% Eosin. 2-3% Bas. 0-5% Endo. 3.5% Lympho. L.5-10% S.20-25%	Neut. 39% Eosin. 4.5% Bas. 1.2% Endo. 3.3% Lympho. 52.1%
Haemoglobin	100%	80-90%
Neutrophiles	Multipartite nucleus Granules fine and faint cytoplasm neutral	Extremely polymorphous nucleus and basophilic. 6-7 lobes. Cell body barely visible. Fine faint granules weakly neutrophilic.
Eosinophiles	Multipartite nucleus Coarse reddish granules	Larger than neutrophiles Nucleus less cut up. 1-4 lobes, pyknotic. Granules numerous and reddish.
Basophiles	Cytoplasm pale. Nucleus bilobed. Coarse blue granules.	Same size as eosinophiles. Coarse blue granules.
Endothelial	Nucleus kidney shaped cytoplasm reticular	Large nucleus vesicular. Cytoplasm has a few fine dark granules.
Lymphocytes	**Large**:—Nucleus round. Cytoplasm clear. **Small**:—Nucleus round and deeply stained which almost fills cell leaving a rim of strongly basophilic cytoplasm.	Nucleus rounded or crescentic in shape, pyknotic, occupying most of the cell with a small amount of clear basophilic cytoplasm. Vary in size.

TABLE 2

NORMAL GUINEA PIG COUNTS (CONTROL)

Date	R.B.C.	W.B.C.	Differential					
			Neut.	Eosin.	Bas.	End.	Lymph.	Hb.
1/16	5,420,000	8,900	32	11	1	6	50	82
1/17	5,310,000	10,350	30	8	—	8	54	80
1/18	5,210,000	10,425	36	2	1	4	57	80
1/20	5,410,000	8,750	38	4	—	6	52	82
1/22	5,995,000	10,570	39	2	1	8	50	84
Av.	5,469,000	9,667	35	5.4	.6	6.4	52.6	81.6

Remarks: Large numbers of platelets in groups and chains were observed. Some cells badly broken up were omitted from the count.

Experiments Proper

Using two control guinea pigs, the normal blood picture was established. Counts were taken for five days and then averaged. The results are shown in Table 2.

PROBLEM 1—(Guinea Pig 1)

What is the effect of one large dose (7680 m.a.s.) of x-rays on the blood tissue and skin? When does its maximum effect occur? When does its effect wear off? These questions are fully dealt with in problem 6.

PROBLEM 2—(Guinea Pig 2)

The effect of continual exposure of 480 m.a.s. applied daily on blood tissue and skin.

Normal Blood Picture: For the first five days normal blood and haemoglobin counts were made on this guinea pig and the average of these taken as shown in Table 3.

TABLE 3

G.P. 2 NORMAL

Date	R.B.C.	W.B.C.	Differential					
			Neut.	Eosin.	Bas.	End.	Lymph.	Hb.
1/26	5,720,000	10,200	31	3	—	1	65	85
2/15	7,650,000	8,750	22	4	—	4	70	83
2/17	5,700,000	9,150	37	8	—	2	53	82
2/23	6,860,000	9,900	22	14	1	2	61	84
2/24	5,820,000	9,025	29	12	—	2	57	87
Av.	6,350,000	9,405	28	8	.2	2	61	84

Remarks: Broken and indefinite cells omitted from count.

TABLE 4

G.P.2 (IRRADIATED)

Date	Irrad. (m.a.s.)	Time Inter.	R.B.C.	W.B.C.	Differential					
					Neu.	Eos.	Bas.	End.	Lym.	HB
2/28	480	—	—	—	—	—	—	—	—	—
3/1	480	24 hr.	5,420,000	9,750	25	11	1	3	60	82
3/2	480	24 hr.	4,400,000	9,200	25	6	—	3	66	81
3/3	480	24 hr.	5,740,000	8,300	30	5	2	4	59	80
3/4	480	24 hr.	5,250,000	5,750	31	5	2	4	58	78
3/5	480	24 hr.	5,095,000	5,600	30	7	—	4	59	79
3/6	480	24 hr.	5,420,000	7,225	36	8	—	2	54	80
3/7	480	24 hr.	5,430,000	6,236	37	8	1	1	53	81
3/8	480	24 hr.	5,340,000	6,466	39	9	—	2	50	80
3/9	480	24 hr.	5,300,000	6,460	37	8	1	2	52	79
3/10	480	24 hr.	5,416,000	6,300	38	8	—	3	51	81
3/11	480	24 hr.	4,960,000	6,100	37	9	1	3	50	80
3/12	480	24 hr.	4,958,000	6,250	39	8	1	4	48	79
3/13	480	24 hr.	5,840,000	6,350	42	9	—	1	48	79
3/14	480	24 hr.	4,780,000	5,825	48	4	—	1	47	78
3/15	480	24 hr.	4,650,000	5,760	47	4	—	1	48	79
End of Irradiation										
Total Irradiation —7,680 m.a.s.										
Total time intervening—360 hours										
3/19	3 days after		5,360,000	4,860	49	5	—	1	45	78
3/20	4 days after		5,150,000	4,800	47	7	1	3	43	77
3/21	5 days after		5,420,000	3,650	48	6	—	—	46	78
3/22	6 days after		5,240,000	4,483	50	6	—	2	42	76
3/23	7 days after		5,020,000	5,050	55	4	—	1	40	76
3/24	8 days after		5,320,000	6,950	52	6	—	1	40	76
3/25	9 days after		5,410,000	4,900	49	6	1	3	41	75
3/29	13 days after		5,470,000	6,200	50	5	—	2	43	77
4/1	16 days after		5,310,000	5,900	46	6	—	3	45	78
4/12	28 days after		5,010,000	5,800	42	7	1	2	48	79
4/29	45 days after		5,650,000	6,250	41	5	—	1	53	82
5/3	49 days after		5,030,000	7,250	39	5	—	—	56	83
5/8	54 days after		6,010,000	8,350	36	5	—	1	58	82
5/16	62 days after		6,151,000	8,990	32	6	1	1	60	81
5/19	65 days after		6,250,000	9,000	31	6	—	3	60 (recovery)	82

Blood Tissue Reactions: The guinea pig was then irradiated with 480 m.a.s. every day, until 7680 m.a.s. had been reached. Following this total irradiation the blood and haemoglobin counts continued to be taken until the guinea pig had returned to normal, and the period of time to do this was noted. The results obtained are shown in Table 4.

Remarks: As the guinea pig returned to normal, after irradiation, many regenerative cells were noted. These were faintly stained cells with a dark border, pinkish centre, and the nucleus appeared to break up into segments. It will be noted as irradiation continues, white blood cells gradually decrease in number. The red blood cells are very slightly affected and possibly show a slight decrease. The haemoglobin is lowered.

In the differential count, the neutrophiles increase in number, whereas the lymphocytes decrease in number. The first apparent effect on the blood tissue occurs four days after initial irradiation; the maximum effect occurs five days after the last irradiation, while complete recovery takes place sixty-five days after the last irradiation.

Gross Appearance and Physical Reactions: The first three days during irradiation no gross skin changes were observed. On the fourth day, the guinea pig appeared feverish and restless. After the fifth day it assumed a sluggish and docile attitude.

3/14—Noted, while the pig is eating a fair amount of food, it does not appear to be partaking of same as freely as control. Hair is coming out rather abundantly. Appears weak and lazy; oxygen insufficiency (air hunger). Slight scaling and reddening of skin visible. This is the first sign of scaling since the beginning of irradiation thirteen days ago.

3/15—This is the last day of exposure; pig looks fairly miserable, occasional shivers chase through body; scaling still apparent.

3/21—Shivering continuing; skin blanched; irritable; appetite poor; appears slightly feverish; air hunger.

3/22—Immature cells noted in blood smear. These had the appearance of indistinct, poorly starved, malformed cells. Scaling still apparent. It was noted that this scaling was more prominent in the centre of the guinea pig's body where the central ray had fallen.

3/23—Appetite still poor; scaling still present. Many immature cells noted in smear.

4/1 —Appetite improving; livelier appearance; scaling still present.

4/12—Appetite almost normal; skin still rough and scaly; hair still coming out freely.

4/19—Appetite back completely; very active; rash still present in central ray region.

4/27—Appears almost normal.

4/29—Slight scaling still present in central ray region.

5/5 —Guinea pig completely normal except for very slight scaling in central ray region; respiration normal; appetite good; very active.

From the results as noted above, we conclude that the daily application of an excessive amount of x-rays produce a blanching of the skin with an accompanying scaling. This reaction of the skin begins the thirteenth day after exposure, is most intense in the central ray region and ends about the sixty-fifth day after total irradiation. The application of x-rays also produces an oxygen insufficiency (air hunger), miserable appearance, loss of hair, and loss of appetite.

PROBLEM 3—(*Guinea Pig* 3)

The effect of continual exposure of 960 m.a.s. applied every two days on blood tissue and skin.

TABLE 5

G.P.3 NORMAL

Date	R.B.C.	W.B.C.	Differential					
			Neut.	Eosin.	Bas.	End.	Lymph.	Hb.
3/18	5,500,000	9,150	28	16	2	3	51	82
3/24	5,130,000	10,600	24	5	1	3	67	87
3/25	5,250,000	8,750	28	8	0	4	60	85
3/26	5,870,000	10,800	30	6	1	5	58	86
3/27	5,820,000	10,200	35	6	0	6	53	82
Av.	5,414,000	9,900	29	8.2	.8	4.2	57.8	84.4

TABLE 6

G.P. 3 (IRRADIATION)

Date	Irrad. (m.a.s.)	Time Inter.	R.B.C.	W.B.C.	Differential					
					Neu.	Eos.	Bas.	End.	Lym.	Hb.
3/29	960	—	—	—	—	—	—	—	—	—
3/30	—	48 hrs.	5,390,000	9,950	30	7	1	2	60	86
3/31	960	—	—	8,550	32	6	—	1	61	—
4/1	—	48 hrs.	5,210,000	6,500	31	2	2	1	64	85
4/2	960	—	5,310,000	6,250	39	5	—	3	53	83
4/3	—	48 hrs.	—	—	—	—	—	—	—	—
4/4	960	—	5,220,000	6,500	37	3	1	2	57	84
4/5	—	48 hrs.	5,480,000	6,700	33	4	—	5	58	84
4/6	960	—	5,460,000	6,600	38	5	2	—	55	82
4/7	—	48 hrs.	4,890,000	5,975	36	6	—	—	58	87
4/8	960	—	5,130,000	7,050	39	3	1	3	54	49
4/9	—	48 hrs.	5,155,000	6,100	40	2	1	1	56	77
4/10	960	—	—	—	—	—	—	—	—	—
4/11	—	48 hrs.	4,900,000	6,430	39	9	—	—	52	80
4/12	960	—	4,880,000	6,050	43	2	2	3	50	78

End of Irradiation

TABLE 7

G.P. 3 (IRRADIATED)—CONTINUED

Date	Irrad. (m.a.s.)	Time Inter.	R.B.C.	W.B.C.	Differential					
					Neu.	Eos.	Bas.	End.	Lym.	Hb.
			Total Irradiation		—7,680 m.a.s.					
			Total time intervening		—336 hours					
4/14	2 days after		5,230,000	4,850	50	3	1	2	44	78
4/16	4 days after		5,320,000	6,200	52	8	—	4	40	80
4/18	6 days after		5,190,000	5,900	51	7	—	—	42	82
4/20	8 days after		5,220,000	5,950	55	2	2	2	39	83
4/21	10 days after		5,380,000	6,800	53	4	—	3	40	82
4/23	12 days after		5,370,000	6,500	48	3	1	2	46	83
4/25	14 days after		5,480,000	6,900	47	6	—	6	41	85
4/28	17 days after		5,440,000	6,820	47	2	2	3	46	83
4/30	20 days after		5,460,000	7,800	49	8	1	—	42	86
5/3	23 days after		5,290,000	7,200	36	7	2	2	43	84
5/10	30 days after		5,650,000	6,900	48	8	—	4	40	82
5/20	40 days after		6,660,000	8,360	40	6	1	3	50	89
5/30	50 days after		5,220,000	8,550	38	3	—	—	59	86
6/9	60 days after		5,390,000	9,960	31	7	1	2	59	86
6/11	62 days after		5,330,000	9,890	32	6	—	2 (reco very)	60	89

Normal Blood Picture: For the first five days normal blood counts were made on this guinea pig and the average of these taken as shown in Table 5.

Blood Tissue Reactions: The guinea pig was then irradiated with 960 m.a.s. every two days until a total of 7680 m.a.s. was reached. The red and white count, differential and haemoglobin counts were taken. Physical reactions and gross appearance noted. See tables 6 and 7.

From the tabulated results above, we can conclude that the first apparent effect occurs on the third day after initial irradiation; the maximum effect occurs two days after the last

irradiation, while complete recovery takes place 60 days after the last irradiation. The white blood cells are the most affected, the neutrophiles increasing in number, whereas the lymphocytes decrease in number. The red blood cells and haemoglobin are slightly decreased.

Gross Appearance and Physical Reactions: For the first few days during irradiation no gross skin changes were observed.

4/2 —(Fourth day). Appetite decreasing, otherwise guinea pig appears quite normal.
4/4 —Shivering, appetite continuing to decrease; subdued appearance.
4/5 —Shivering, restless and slightly feverish.
4/6 —Shivering continuously, appetite poor.
4/8 —Appears to be suffering from "air hunger"; very quiet and inactive; sluggish; scaling beginning.
4/12—Definite scaling which seems to be localized at centre of the body where central ray enters. At that spot tenderness was noted (pig squeals at touch). Has the appearance of a rash; losing quite a bit of hair; "air hunger"; restless.
4/14—Pig still has rash but not getting any worse; blood count going down; "air hunger".
4/16—Scaly rash in central ray region covering an area of approximately 3.5 cms; oxygen insufficiency; fairly active but squeamish; slight scaling of the rest of the body noted.
4/18—Hair coming out rapidly; appetite poor; scaling of entire body, especially at central ray region.
4/27—Central ray region rash still present; skin appears dry and scaly.
4/28—Breathing still fast and irregular (172 res. per min.) scaling still present.
5/5 —Skin reaction still present; breathing fast and irregular; very quiet and appetite poor.
5/12—Appetite has returned; pig appears fairly normal.
5/10—Guinea pig completely normal except for very slight scaling of skin.

From the results as noted above, we may conclude that the application of 960 m.a.s. every two days produces a condition of tenderness and scaling of the skin. This reaction begins the tenth day after exposure, is most intense in the central ray region and ends about the fifty-first day after total irradiation. The x-rays also produce "air hunger", decreased vitality, loss of hair and loss of appetite. The application of 960 m.a.s. given every second day gives us more intensive changes which however do not last as long as in the previous case.

PROBLEM 4—(*Guinea Pig* 4)

The effect of continual exposure of 1920 m.a.s. applied every four days on blood tissue and skin.

Normal Blood Picture: The normal blood picture of this guinea pig was determined for five days and the average taken as shown in Table 8.

Blood Tissue Reactions: The guinea

TABLE 8

G.P. 4 NORMAL

Date	R.B.C.	W.B.C.	Differential					Hb.
			Neut.	Eosin.	Bas.	End.	Lymph.	
4/2	6,220,000	9,250	30	6	—	2	60	82
4/4	6,150,000	9,900	36	3	—	1	60	80
4/5	6,540,000	10,050	32	4	—	3	59	82
4/6	5,630,000	9,230	36	5	1	2	56	85
4/7	6,050,000	10,250	30	2	—	2	66	87
Av.	6,118,000	9,736	32.9	4	.2	2	60.2	83

TABLE 9

G.P. 4 (IRRADIATED)

Date	Irrad. (m.a.s.)	Time Inter.	R.B.C.	W.B.C.	Differential					
					Neu.	Eos.	Bas.	End.	Lym.	Hb.
4/6	1920	—	—	—	—	—	—	—	—	—
4/7	—	—	6,230,000	7,450	32	5	0	2	61	86
4/8	—	—	6,530,000	6,500	30	4	1	1	64	83
4/10	1920	96 hrs.	5,830,000	6,250	31	3	—	3	63	84
4/11	—	—	—	—	—	—	—	—	—	—
4/12	—	—	5,725,000	7,250	36	6	1	—	57	81
4/13	—	—	—	—	—	—	—	—	—	—
4/14	1920	96 hrs.	5,610,000	6,700	45	2	—	4	49	79
4/15	—	—	—	—	—	—	—	—	—	—
4/16	—	—	6,100,000	6,660	35	1	2	—	62	71
4/17	—	—	—	—	—	—	—	—	—	—
4/18	1920	96 hrs.	6,300,000	5,200	39	5	1	2	55	80
			End of Irradiation							
			Total Irradiation—7,680 m.a.s.							
			Total time Intervening—288 hours							
4/16	1 day after		5,870,000	6,200	43	5	—	—	52	80
4/19	3 days after		5,900,000	5,750	45	4	—	5	46	79
4/21	5 days after		5,820,000	6,290	50	3	—	7	40	77
4/23	7 days after		5,130,000	7,100	56	4	1	2	37	80
4/25	9 days after		5,620,000	7,400	51	1	—	5	43	82
4/27	11 days after		5,670,000	7,600	49	8	2	—	41	84
4/29	13 days after		5,720,000	7,900	48	2	—	2	48	80
5/1	15 days after		6,190,000	7,900	36	3	—	4	57	86
5/13	27 days after		5,960,000	7,100	46	6	—	4	50	87
5/15	29 days after		5,970,000	8,260	36	7	—	5	52	86
5/20	34 days after		6,290,000	8,700	35	2	2	1	60	84
5/29	40 days after		6,100,000	9,300	32	1	1	4	62	*82
5/31	42 days after		6,290,000	9,100	31	4	—	1	64	87

*Rec.

pig was then irradiated with 1920 m.a.s. every four days. The results obtained are shown in Table 9.

From these results we conclude that the first apparent effect occurs on the 1st day following the initial irradiation; the maximum effect occurs the second day after the last irradiation, while complete recovery takes place about 40 days after the last irradiation. Other results corresponded with previous experiments.

Gross Appearance and Physical Reactions

4/9 —Very quiet and docile; when normal was very much alive and easily frightened; skin normal; appetite good.

4/12—Skin beginning to scale (six days after first irradiation) especially in the region of the central ray; oxygen insufficiency.

4/16—Slight scaly rash in central ray region; skin blanched; breathing fairly rapid; quite active; appetite not quite normal.

4/18—Scaling still present; breathing rapid.

4/19—Scaling in the central ray region; appetite poor.

4/27—Definite rash, brownish and scaly, central ray region. This is the worst rash noticed to date. The rash covers an area of a large nickel; breathing fast; slight scaling observable throughout whole body; hair coming out rapidly; appetite poor; very subdued.

4/28—Rash prominent in central ray region; breathing fast; appetite poor; subdued.

5/5 —Slight scaling still present in central ray region; breathing fast and irregular; appetite poor.

5/12—Appetite returned twenty-fourth day after the last irradiation. Skin fairly clear. Guinea pig just about normal.

We may conclude from the above observations that a strongly periodic irradiation such as 1920 m.a.s. every four days has its maximum effect

upon the skin earlier than in the other cases, but that its continued action is not as prolonged. Also its effects seem much more marked. The scaling begins about the sixth day after the total 7,680 m.a.s. irradiation and complete recovery occurs on the twenty-fourth day.

PROBLEM 5 (*Guinea Pig* 5)

The effect of continual exposure of 3,840 m.a.s. applied every eight days on blood tissue and skin.

Normal Blood Picture: The normal blood picture of the guinea pig was determined every day for five days and the average taken as shown in Table 10.

Blood Tissue Reactions: The guinea pig was then irradiated with 3,840 m.a.s. every eight days until a total of 7,680 m.a.s. had been reached. Similar observations were made as in the experiments above.

The results are tabulated in Table 11.

From the above we can conclude that this greater exposure seems to have its maximum effect in a much shorter time than was the case in the previous experiments. The maximum effect seems to occur the thirteenth day after the first irradiation or five days after the last irradiation. Again the white blood count goes down, the red blood count remains about the same; the haemoglobin goes down, the

TABLE 10

G.P. 5 NORMAL

Date	R.B.C.	W.B.C.	Differential					
			Neut.	Eosin.	Bas.	End.	Lymph.	Hb.
5/2	5,380,000	8,800	30	3	—	2	65	85
5/3	5,730,000	9,800	35	4	1	3	57	83
5/4	5,840,000	10,030	28	8	—	1	63	82
5/5	5,200,000	9,670	22	4	—	2	72	80
5/6	5,800,000	8,700	32	14	1	—	53	82
Av.	5,590,000	9,450	29	7	.4	1.3	62	82

TABLE 11

G.P. 5 (IRRADIATED)

Date	Irrad. (m.a.s.)	Time Inter.	R.B.C.	W.B.C.	Differential					
					Neu.	Eos.	Bas.	End.	Lym.	Hb.
5/6	3840	—	5,330,000	9,900	30	4	2	—	64	82
5/7	—	—	5,650,000	7,890	32	5	—	3	60	81
5/8	—	—	5,210,000	7,700	39	8	—	3	50	80
5/9	—	—	4.960,000	7,900	37	7	—	2	54	87
5/10	—	—	5,690,000	8,100	39	10	—	—	51	86
5/11	—	—	5,110,000	7,650	40	4	1	1	54	84
5/12	—	—	4,930,000	7,250	39	3	—	1	57	80
5/13	—	—	5,210,000	5,900	39	1	3	—	57	79
5/14	3840	192 hrs.	5,350,000	7,700	38	6	—	2	54	79
End of Irradiation										
Total Irradiation—7,680 m.a.s.										
Total time Intervening—192 hours										
5/15	1 day after		5,100,000	6,700	39	3	1	1	46	78
5/16	2 days after		4.960,000	6,800	40	4	—	3	53	76
5/17	3 days after		4,840,000	7,700	41	5	—	4	50	77
5/18	4 days after		5,170,000	5,400	53	—	2	1	44	77
5/19	6 days after		4,930,000	4,500	54	6	2	—	38	78
5/20	8 days after		5,380,000	4,900	53	2	—	2	43	78
5 21	9 days after		5,435,000	5,800	40	4	—	2	54	86
5/23	11 days after		6,930,000	6,110	41	3	2	1	53	89
5 25	13 days after		5,340,000	6,250	40	2	—	3	55	83
5/30	18 days after		5,890,000	8,350	37	3	1	—	59	82
6/5	21 days after		5,930,000	9,640	31	3	—	4	62	81
6/7	23 days after		5,440,000	9,360	30	2	—	6	(Recovery) 62	89

neutrophiles go up and the lymphocytes come down. Complete recovery occurs approximately at the twenty-first day after the last irradiation.

GROSS APPEARANCE AND PHYSICAL REACTIONS

5/9 —Small red dots appear on skin.

5/11—Small red dots form into blisters; parts of the skin starting to peel; the animal has become much subdued; central ray region has largest red spot of all which is scaling; breathing rapid, suggesting oxygen insufficiency (air hunger); appetite decreasing.

5/13—Skin peeling; red dots on skin getting larger; breathing fast and irregular.

5/15—Quiet but irritable when touched; general redness throughout; spots noted the other day seem to have disappeared, a rash forming in its place; air hunger; appetite poor.

5/30—Fairly active; rash still present.

6/5 —Appetite returned; animal now about normal; very slight scaling still noted however.

The first observable effect upon the skin seems to have occurred on the third day after the first irradiation; the maximum effect on the thirteenth day, complete recovery on the twenty-first day after the last irradiation.

TABLE 12

G.P. 6 NORMAL

Date	R.B.C.	W.B.C.	Differential					
			Neut.	Eosin.	Bas.	End.	Lym.	Hb.
5/30	5,280,000	9,400	35	4	1	3	57	82
5/31	6,680,000	9,600	22	4	—	4	70	80
6/1	5,340,000	10,300	22	14	1	2	61	79
6/2	5,660,000	10,400	28	8	—	4	60	80
6/3	5,480,000	9,900	24	5	1	3	67	82
Av.	5,488,000	9,920	26	7	0.6	3	63	80

TABLE 13

G. P. 6 (IRRADIATED)

Date	Irrad. (m.a.s.)	Time Inter.	R.B.C.	W.B.C.	Differential					
					Neu.	Eos.	Bas.	End.	Lym.	Hb.
6/3	7,680	—	5,120,000	9,900	30	2	—	2	66	82
6/4	—	—	5,360,000	7,800	32	3	1	2	62	80
6/5	—	—	5,140,000	6,000	34	4	—	3	59	82
6/6	—	—	4,990,000	4,400	37	2	1	—	60	79
6/7	—	—	4,960,000	3,480	49	1	—	2	48	79
6/8	—	—	5,630,000	3,800	45	2	—	3	50	78
6/9	—	—	5,360,000	3,950	53	5	2	2	62	78
6/10	—	—	5,380,000	4,800	51	6	1	4	38	73
6/12	—	—	5,380,000	5,100	44	3	—	2	51	82
6/13	—	—	5,090,000	6,650	43	4	2	1	50	85
6/15	—	—	5,630,000	7,750	45	5	2	2	46	85
6/17	—	—	5,599,000	8,700	43	8	—	3	46	82
6/20	—	—	5,850,000	8,860	42	6	1	6	45	82
6/21	—	—	5,800,000	9,400	38	2	—	2	58 (recovery)	82
6/22	—	—	5,860,000	9,850	33	2	2	4	59	86

Thus a strong irradiation produces a more intense effect, which effect does not, however last as long.

PROBLEM 6 (*Guinea Pig* 6)

The effect of continual exposure of 7,680 m.a.s. applied every sixteen days on blood tissue and skin.

Normal Blood Picture: This was taken every day for five days, as shown in Table 12.

Blood Tissue Reactions: The guinea pig was then irradiated with 7,680 m.a.s. The results are shown in Table 13.

From the above results it will be

noticed that the maximum effect took place four days after the initial irradiation. As in the case of the other guinea pigs, the white blood count went down, the red remained about the same, and the haemoglobin count decreased slightly.

From these results we can conclude that the greater irradiation of 7,680 m.a.s. has a more profound effect, the maximum effect occurring in a short time, whereas recovery time is also much shorter.

Gross Changes and Physical Reactions

6/6 Blood count low; most marked scaling visible in region of central ray within an area of 3 inches. Scaling appears concentrated in patches and has a reddish, inflammatory basic colour with marked yellowish scaling. Scaling is also noticeable in between patches.

6/8 —Pig quite docile; appetite poor; scaling still present.

6/10—Blood count slightly higher; appetite poor; pig quiet; scaling still present; respiration fast and irregular.

6/13—Skin still scaling; appetite poor.

6/15—Scaling still present; air hunger; appetite poor; complete skin recovery occurs three weeks after irradiation.

Summary and Conclusions

1) The blood tissue of humans differs in many respects to that of guinea pigs (as shown on page 4).
2) The blood tissue of guinea pigs undergoes a change when irradiated.
3) This change consists of primarily a decrease in the white cells, a slight decrease in the red cells and haemoglobin.
4) The most marked change seems to occur in the lymphocytes present, in that they decrease in number. There is a corresponding increase in the neutrophiles while the rest of the white blood cells remain unchanged.
5) Short periodic and continuous applications of x-rays do not affect the blood tissue as quickly as do the periodic larger doses.
7) The x-ray has an effect on the skin of guinea pigs and on his physical reaction.
8) This effect (on the skin) is more marked and occurs in a shorter time when the irradiation is more intense.
9) The more severe the effect the longer the time necessary for complete healing of the skin to take place.
10) This appears to be just the opposite to what occurs in the blood stream for in the latter the more intense the irradiation, the more severe the effect, but the shorter the time necessary for complete recovery.
11) The excessive application of x-rays will produce a blanching of the skin, scaling (which is most marked in the central ray region) air hunger due to oxygen insufficiency, lazy miserable appearance, and loss of appetite.
12) The time required for complete recovery to take place after reasonable exposure to x-rays would be about sixty-five days.

NOTE: Since the above experiments were performed on guinea pigs, it may be expected that humans might not react entirely the same way.

BIBLIOGRAPHY

1) Scarborcugh, Robert A.—"Normal Blood Picture of the Guinea Pig"; Yale Journal Biol. & Med. 3;547, July 69. Oct. 31; Academy of Medicine (1932)
2) Latta, Stephens John and Ehlers, Orrin C.—"The Effects on the Blood and the Hemopoietic Organs of Repeated Short exposures to X rays."; American Journal of Anatomy; 46-47; 1930-31; pp. 447-471.
3) Piney, A. and Mayneord, W. V.—"Some Effects of X-radiation on Blood"; The British Journal of Radiology, August 1928, page 257-273.
4) Bourne, G.—"The Effect of X rays on Blood and Spleen of White Mice—A Preliminary Investigation" 1932—M. J. Australia; Dec. 10, 1932, pp. 722-723, Academy of Medicine.
5) Stewart, W. H. and Illick, H. E. "The Effect of X ray on the White Blood Cells"; New York State Journal of Medicine, 1932, pp. 9-10.
6) Colwell and Russ—"Radium X ray and the Living Cell" University of Toronto Library.
7, Desjardins Arthur—"Radiosensitiveness of Cells and Tissues and some Medical Implications"; Arch. Surg. 1932-25. Pg. 926.

8) Enfield, C. D. "Radiography" 1925—University of Toronto Library.
9) Arthur and Muir—"Manual of Practical X-ray Work".
10) Glasser—"The Science of Radiology"—1933.
11) Kay, F. W. C.—"Practical Application of X rays," 1923.
12) Kerley, Peter—"Recent Advances in Radiology", 1931, University of Toronto Library.
13) Mottram, J. C.—"Examination of the Blood of X-ray Workers"; Brit. J. Radiol. 5; pp. 156-158; Feb. 1932.
14) Maynard, W. V. "Physics of X-ray Therapy".
15) Nature Magazine—"X rays—effect on Blood"—Nature 138; pp. 687-688; Oct. 1936.
16) Dunlap, C. E.—"Injurious Effects of X-ray Radiations on Blood and Hemopoietic Tissues . ."—Arch. Path. 34: pp. 562-608, Sept. 1942.
17) Harvey, W. F.—"Review of Effect of Radiation on Cells and Tissue of Skin." —Edinburgh M. J. 49: pp. 529-552 Sept. 1942.
18) Henshaw, P. S.—"Effects on Tissues and Blood of C3H Mice Produced with Single Small Whole Body X-ray Exposures."—J. Nat. Cancer Inst., 4: pp. 477-484 April 1944.
19) Henshaw, P. S.—"Changes Produced with Intermediate Range X-ray Doses and Comparison of Relative Suceptibility of Different Kinds of Animals."—J. Nat. Cancer Inst., 4: pp. 485—501 April 1944.
20) Henshaw, P. S.—"Tissue and Cellular Changes Brought About with Single Massive X-ray Doses." —J. Nat. Cancer Inst., 4: pp. 503-512, April 1944.
21) Henshaw, P. S.—"Effect of Repeated Small Doses on Blood Picture, Tissue Morphology and Life Span in Mice."—J. Nat. Cancer Inst., 4: pp. 513-522 April 1944.
22) Borak, J.—"Radiation Effects on Blood Vessels . . ." Radiology 38: pp. 718-727, June 1942.
23) Thompson, W. S.—"Detrimental Biological Effects of Roentgen Rays."—Proc. D. Centenary, pp. 86-91 . . . . 1940.
24) Henshaw, P. S.—"Leukemia in Mice Following Exposure."—Radiology 43: pp. 279—285, Sept. 1944.

ANNOUNCEMENT

THE SIXTH ANNUAL DENTAL SEMINAR

At the Sixth Annual Dental Medicine Seminar in Palm Springs, California, October 23-28, the following will take part:

Francis A. Arnold, Jr, B.S., D.D.S., Senior Dental Surgeon, United States Public Health Service.

D. Harold Copp, M.D., Ph.D., Associate Professor of Physiology at the University of California. His research work includes studies of medical uses of radioactive isotopes and of bone metabolism.

Arthur C. Curtis, B.S., M.D., Professor and Director of the Department of Dermatology and Syphilology at the University of Michigan.

Seymour M. Farber, M.D., Assistant Clinical Professor of Medicine, University of California Medical School and in charge of the University Dental College's course in Internal Medicine.

Wilton Marion Krogman, Ph.B., M.A., Ph.D., Professor of Physical Anthropology, Graduate School of Medicine, University of Pennsylvania.

Balint Orban, M.D., D.D.S., Director of Research, Colorado Dental Foundation, Colorado Springs.

Paul Popenoe, Sc.D., director of the American Institute of Family Relations.

Applications should be mailed to the executive secretary of the Seminar, Miss Marion G. Lewis, Room 200, Hooper Foundation, U. C. Medical Centre, San Francisco 22, California.

Perhaps we are closing the time gap between discovery and use. Certainly, $2,000,000,000 and several thousand scientists did some gap-closing in the case of uranium fission during the recent war.

We must not be complacent because we can reach 99,000,000 people with sound and bulletin a thousand high-speed presses any hour of the 24. There are millions (in the U.S.A.) who may mouth science and scientific jargon, yet they do not understand the methods of science, much less practise them.

It is a hard, intelligent, and rewarding task to give the people opportunity to understand. Every year there is a new audience, eager and receptive if their inquisitiveness is not rubbed off by dull, didactic teaching. Always the old to some is the new to many. Perhaps it has often been so. We like to believe that there is now more opportunity to understand than ever before.—Watson Davis, Director, Science Service, Washington, D.C., in Science, *Sept. 3, 1948.*

REPORT OF AN UNUSUAL EXODONTIA CASE

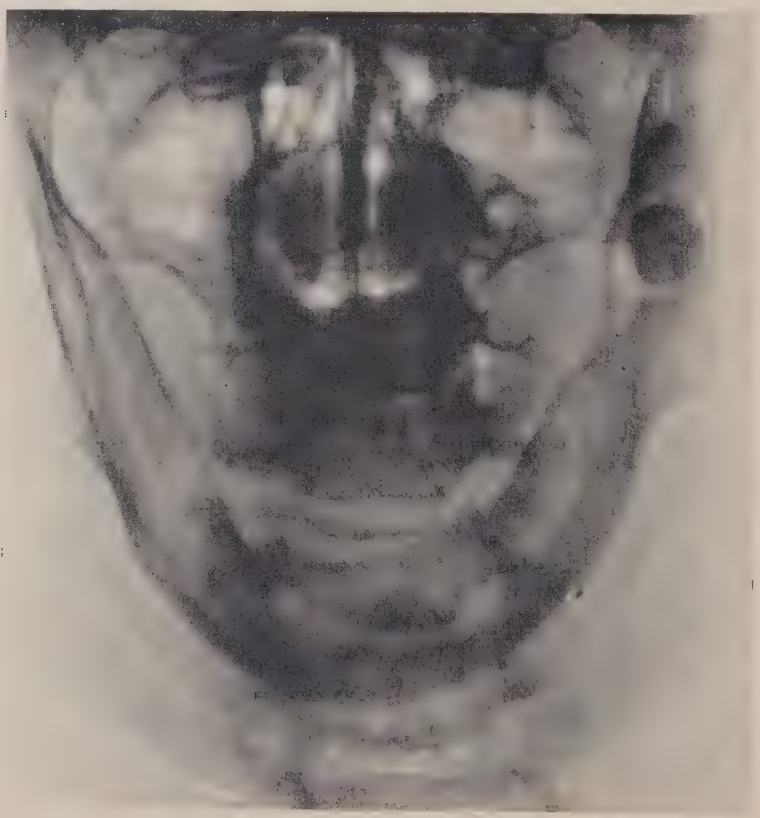
by FRANK SMITH D.M.D., Vancouver, B.C.
Senior, Dental Dept. Vancouver General Hospital.

PATIENT, male, aged 58, wearing dentures, presented with swelling; pain around the posterior border of left ramus of the mandible. X-rays, postero-anterior and lateral views revealed a horizontal unerupted lower third molar, well above the normal tooth-bearing area on posterior border of ramus, approximately equidistant from angle and condyle, complicated with large abscess of mandible. Clinical examination showed presence of fistula draining intra-orally.

The obvious possibility of developing a pathological fracture on surgical removal of the tooth was not overlooked by the operator.

First operative procedure was performed in the office under mandibular block anaesthesia. An incision was made at site of fistula in line with the crown and a drain (vaseline gauze) was inserted. This was done to reduce swelling and to establish greater drainage.

For removal of tooth, patient was



ANTEROPOSTERIOR VIEW

*(Bismuth, iodoform, petrolatum paste)

LATERAL VIEW

hospitalized and operation carried out under sodium-pentothal anaesthetic. The lingual plate of the ramus was deemed the weaker so proceeded to remove same; extreme care was exercised in retracting the mandibular nerve. As little bone as possible was surgically removed around buccal of crown to free the tooth and ultimately it was removed in toto. A dressing of BIPP* ½″ gauze was put in the socket and left for five days, then removed.

Observations after removal of tooth, abscess had destroyed buccal plate of ramus over root portion obliterating the mandibular foramen. The remaining portion of jaw was a very thin plate around the crown.

Post-operative. Patient was able to wear dentures, and to masticate. He was discharged from hospital less than twenty-four hours after the operation. Seven days after discharge, patient had parasthesia of mental region of chin. Fourteen days after, there was considerable less numbness.

We may reasonably conclude that, in general, the retention of vitamin C in vegetables in pressure cooking is likely to be no worse, and will probably be better, than in the saucepan when either process is used in the home. There is certainly no reason, from our experiments, to suppose that pressure cooking should be discouraged because of its effect upon the nutritive value of vegetables.

So far as other foods and vitamins are concerned, very little has been published. A few experiments of our own on the vitamin B content of pulses suggest that the pressure cooker is better than the saucepan. — Gweneth M. Chappell, M.Sc. and Audrey M. Hamilton, B.Sc., in Br. Med. Jour. Apr. 2, 1949.

ANNOUNCEMENTS

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at the Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver Anniversary of the inauguration of this annual event.

Among those who have accepted invitations to appear on the program are:

Dr. R. O. Schlosser, Chicago — who will conduct the progressive clinic on "Immediate Complete Denture Prosthesis"
Dr. R. J. Godfrey, Toronto—"Partial Dentures."
Dr. J. P. Coupland, Ottawa—"Radiographic Technique"
Dr. J. D. Gage, Cleveland—"Use of Diamond Points"
Lt. J. R. Conant, D.C., U.S.N., Bethesda—"Periodontia"
Dr. J. A. Salzmann, New York—"Preventative Orthodontics"

M. L. Donigan, Director
1414 Drummond St., Montreal, Que.

Université de Montréal—Faculty of Dental Surgery

Orthodontic Courses for the General Practitioner

(These courses will be given in English)

Although Orthodontics is a very difficult science, a true labyrinth in which the dentist must not venture without special preparation, there exists, nevertheless, a great number of malocclusions that could be improved or cured by the general practitioner. The Faculty of Dental Surgery of the Université de Montréal, conscious of this state of things, has decided to offer to all the dentists of Canada a practical course in Orthodontics which is primarily meant for the general practitioners who live far from centres, and who, because of lack of directives, do not know exactly where, when and how to intervene in cases of simple malocclusions.

This course will take place from November 19 to 26, 1949, and will be theoretical and practical.

Great importance will be given to diagnosis, early detection and prevention, as well as to therapeutic methods appplicable by any practitioner.

If you are interested in this course, apply to:

Doctor Paul Geoffrion, Vice-Dean,
Head of the Orthodontic Department,
Faculty of Dental Surgery,
Université de Montréal.

SINCE THE REGISTRATION NUMBER IS LIMITED TO 30, IT WILL BE TO YOUR ADVANTAGE TO REGISTER AS SOON AS POSSIBLE. Send cheque for $60.00 with application.

Course in Oral Surgery and Anaesthesia

The Faculty of Dental Surgery of the Université de Montréal is offering a one-week postgraduate course in Oral Surgery and Anaesthesia, from November 14 to 18, 1949 inclusive.

Doctor Harry M. Seldin, of New York City, one of the outstanding specialists of Oral Surgery in America, will present a series of lectures and clinics during that course.

He will be accompanied by two of his own assistants.

The fee for this course is $65.00, payable in advance with the registration, and enrolment is limited to thirty dentists.

If you are interested in this course, apply to:

Doctor Gérard de Montigny,
Faculty of Dental Surgery,
Université de Montréal.

The closing date for registration is August 1st.

Character is not made in a crisis—it is only exhibited—Dr. Robert Freeman.

The Forum

CHILD MANAGEMENT IN DENTAL RADIOGRAPHY

by ALBERT G. RICHARDS, B.S. (Ch.E.), M.S., Ann Arbor, Mich.

Conclusions of paper in Jour. of D. for Children, 1st quarter, 1949

1. Children respond better when addressed by a name that implies personal importance.

2. It is preferable to have the mother of the patient remain in the reception room. However, there are instances when she is permitted in the x-ray room.

3. Safe investigation of the x-ray machine by the patient is one method employed to relieve fear. The frightened child needs assurance concerning the x-ray unit and its relation to him.

4. It is advisable to speak slowly and use simple words when instructing a child.

5. Admiration and subtle flattery are useful devices to obtain response and cooperation from the patient.

6. The head of the x-ray unit is positioned fairly close to one side of the patient's head until it is finally positioned for making the exposure.

7. The patient is carefully instructed regarding his duties in the production of the radiograph and is praised when cooperation is obtained.

8. Positive statements which tell the young patient what to do prove useful in securing cooperation.

9. The use of fast speed film is a necessity when radiographing preschool children.

10. The use of an assistant to make the exposure while the operator holds the patient's attention is a valuable procedure.

11. A loud buzzing noise produced by the operator in an effort to conceal the exact moment during which the exposure is made is a highly successful technique and is used in instances where the patient is frightened and moves when the x-rays are turned on.

12. A fake exposure made with the x-ray unit turned off and with the film and cone positioned only approximately in the proper manner has proven to be a useful technique to dispel the fears of some children regarding radiography.

13. Genuine praise of a child's efforts is an important technique in child radiography.

14. Failure to obtain radiographs must be met with firm patience and the suggestion that a new effort will be made at the next appointment.

15. The very young patient can be taught at home the proper method of film retention.

16. When it is impossible to obtain intraoral radiographs of the posterior primary teeth, the extra-oral lateral jaw technique may be substituted.

WHAT YOUR PATIENTS EARN

Editorial by J. A. SALZMANN in N.Y. Jour. of D., May 1949

It should be of interest to dentists who have been used to treating patients during the high-income war period and those who started their practice in the post-war years to learn what the earning potential of their patient is at present. According to statistics made public by the United States Census Bu-

reau, the average income of families in the United States, during 1947, was $3,000 a year. This is the highest family income recorded up to that time. Since 1947, there has been a leveling off of family incomes and a rise in unemployment.

According to the Census Bureau, income was distributed among the nation's 37 million families as follows:

Four million had under $1,000; six million had $1,000 to $2,000; eight million $2,000 to $3,000; eight million $3,000 to $4,000; four million $4,000 to $5,000; three million $5,000 to $6,000; three million $6,000 to $10,000; and one million $10,000 or more.

Only four million families—or slightly fewer than one out of each nine families in the country—had in 1947 the $6,000 which President Truman suggested as the starting point for the income tax increase he asked Congress to consider. Thirty of the 37 million families of the country had incomes of less than $5,000 annually in 1947.

The foregoing figures should give dentists a basis for determining the capacity of patients to pay for dental care. Ability of patients to pay for service is as least as important as "efficient" handling of patients by dentists. There is no doubt that certain phases of dental practice should not be left to the decision of the patient but must be prescribed by the dentist where health and preservation of the patient's teeth are concerned. At the same time, there are many types of service on which the patient does not have a choice. The choice, under our present form of dental practice is largely based on funds available to the patient. An "oversold" patient is a liability. Furthermore, the fact cannot be stressed too much that patients who avail themselves of regular dental supervision and care, in the long run, spend less money on their dental needs.

An important item in the income of the practising dentist are the fees he received from services rendered to children. Dentists must take time to explain to parents the importance of caring for the teeth of children, especially the saving of permanent first molars. These teeth may still be considered the "keystone" of the adult dentition.

ANNOUNCEMENT

University of Toronto, Faculty of Dentistry

CONTINUATION COURSES FOR GRADUATES IN DENTISTRY

APPLIED ANATOMY FOR DENTISTS — **Sept. 14, 15, 16, 1949**

This course will consist of demonstrations and discussions illustrated by dissections, bones, models, charts and lantern slides.

The course will be given in the Department of Anatomy, University of Toronto, under the direction of Professor J. C. Watt.

Anatomy of interest to dental practitioners will be reviewed with practical applications. Parts covered will include the mandible, maxilla, hard and soft palate, cheeks and lips, floor of mouth, tongue, salivary glands, mandibular and maxillary nerves, sphenopalatine, otic and submandibular ganglia, maxillary artery, mandibular joint, muscles of mastication, infratemporal fossa, pharynx, larynx, trachea, bronchi and oesophagus.

Tuition fee $50.00 — **Enrolment limit 6**

PERIODONTIA — **Sept. 26-30, 1949**

This course will include consideration of the nature of periodontal disease, examination and case management, pocket therapy, oxygen therapy, metabolic influences on the periodontium, significance and correction of occlusal function, gingival recession, pocket surgery, applications of principles of periodontal practice to operative and prosthetic procedure.

The course will be under the general direction of Drs. H. K. Box and C. H. M. Williams.

Tuition fee $75.00 — **Enrolment limit 14**

Those interested are asked to inquire respecting enrolment. Please address inquiries to: The Dean, Faculty of Dentistry, University of Toronto, 230 College Street, Toronto, Ontario.

THE FLUORINE DANGER

by R. W. BUNTING, Ann Arbor

Condensed from Jour. Mich. State. D. Soc., April, 1949

Today, dentistry and the public are acutely fluorine conscious. Dentists and the public have become greatly interested in this new approach to dental health. In most dental offices children are receiving fluorine applications, and the public generally is seeking such service.

Many practitioners are devoting a considerable part of their time, as well as that of their hygienists, to the fluorine treatment of children's teeth.

However, in this procedure, commendable as it appears to be, there lies a danger. At its best, as yet, there is no report that indicates it to be more than 40 per cent effective. That is, if we could fluorinate all children's teeth, there would still be 60 per cent of tooth surfaces that would be liable to caries. Half a loaf, or even 40 per cent is better than no bread at all, but it must be remembered that it is not a whole loaf.

In the enthusiasm over the virtues of this preventive measure there is danger that dentists may over-sell its virtues, and the public will come to the erroneous belief that once their children are so treated they will be protected from further dental disease. When in a year or so, Johnny or Mary has a new crop of cavities, the parents will be quite disillusioned and resentful of the dentist who performed the service. Especially is this true when an inordinately high fee is exacted for a treatment which does not measure up to their expectations.

It is most important that the public be informed that fluorination of the teeth provides only an over-all protection of 40 per cent of children's teeth, and further, that it will not be as effective in some children as in others. In fact, there is evidence that in some children, it is not effective at all.

This is not to say that the treatment is of questionable value. It does decrease caries in most children, more in some than in others, but in the over-all picture of dental caries control, it is a valuable and effective dental health measure. The danger is that the public will expect too much and in their disappointment, fail to avail themselves of even these partial measures of control. Dentists and hygienists should make these facts clear to the parents of children whom they treat, not only for a clear understanding, but also for their own protection

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CARIES CONTROL

Condensed from Editorial in the Alpha Omegan, April, 1949

Recently Isaac Schour announced that he had heard of the formation of an organization known as the A.I.C. The initials stand for "Am I Confused!" and embraced practicing dentists who confessed an inability to evaluate properly the conflicting reports and extravagant claims made by some investigators in the field of caries control. To make confusion worse, the popular press had led patients to believe that the near total elimination of dental caries in children is dependent solely upon the honest administration of known facts by conscientious practitioners. Now eager parents ask knowingly for the newer remedies which achieve a certain 90% reduction in caries incidence in preference to the old method, of several months ago, which promised only a very shaky 40%. Once again propaganda has outstripped achievement and dentistry which has for so long cried out against the injustice of near total neglect by the public prints is now striving to stem the flood of inaccurate verbiage which threaten to inundate it. It will require a gre deal of careful cleansing to remove th debris deposited by the coursing streams The cleansing of course will have to or done by the profession—both by ore

The

viduals and through organized groups.

At a recent round table discussion on caries control at Univ. of Illinois the panel of experts there assembled agreed more or less unanimously on the status of several methods presently employed in controlling the incidence of dental decay. 1. In the field of diet it was agreed that reduction of the amount of fermentable sugars ingested was of prime importance. It has been incontrovertibly demonstrated in both animal and human experimentation that an increase in fermentable sugar intake results in increased caries attack. 2. It has been established that elimination of fermentable debris from the mouth by tooth brushing or rinsing immediately after each meal, before fermentation has occurred is a factor in caries control. 3. Less definitely established, but meriting investigation, is the role of enzyme inhibitors which will prevent fermentation. 4. Thus far of limited but quite definitely established value is the use of fluorine to render tooth tissue less vulnerable to dental decay. 5. Experiments are being conducted with ammonium ion releasing substances which apparently reduce caries incidence by reducing the number of bacteria and neutralize acids.

With this knowledge the average practitioner can prescribe a regimen of home and office routine which should have a beneficial effect on reduction of caries incidence. This of course deals only with prevention of the inception of the lesion. The treatment of caries after it has gained a foothold is another problem.

THUMB-SUCKING

by MAURY MASSLER, D.D.S., M.S. and ARTHUR W. S. WOOD, D.D.S.

Summary of paper in Jour. of D. For Children, 1st quarter, 1949

1. Thumb-sucking may be an aetiological or contributory factor in the production of malocclusion.

2. Sucking of the thumb or fingers is normal in the infant and the habit is usually lost by the end of the second year of age.

3. If thumb-sucking is continued beyond the second year it is indicative of some disturbance in the emotional life of the child. The exact causes of thumb-sucking are often difficult to discover but appear to be associated most frequently with parental rejection or demands.

4. Malocclusion of the primary dentition caused by thumb-sucking ceases if the normal function of the tongue and lips exists. If normal function does not exist, in all probability the malocclusion will persist. In any case, treatment should consist in discovering the use of the thumb-sucking and correcting it. Orthodontic intervention this purpose is therefore rarely cated during the primary dentition s 2 to 6 years).

On the other hand, malocclusions e mixed or permanent dentitions the age of 7 years) caused by thumb-sucking are usually permanent and are not self-corrective. Orthodontic intervention for the thumb-sucker is therefore usually recommended, even when the cause cannot be removed.

6. Treatment of thumb-sucking should be directed primarily towards the discovery and elimination of the basic emotional factors causing the act. "Breaking the habit" is never indicated unless a dental deformity actually exists. If dental deformity does exist, it is necessary to transfer the act of thumb-sucking to some other, less noxious, form of activity such as carving, drawing, etc.

7. Devices designed to "break" the habit and which are presented to the child as a form of punishment are to be condemned. Such devices seldom succeed. Devices which are designed to help the child transfer the habit, and which are acceptable to him usually succeed.

8. The treatment of thumb-sucking is an individual problem. To properly motivate the child to correct the habit requires ingenuity, wisdom, sympathy and understanding.

FOCAL INFECTION

by RUSSELL L. CECIL, M.D., New York, N.Y. Professor of Clinical Medicine, Cornell University Med. School.

Condensed from Jour. of D. Medicine, April, 1949

The original theory of focal infection as propounded by Frank Billings of Chicago, was to the effect that foci of infection in the tonsils, teeth, sinuses, and other sites, may produce disturbances in distant parts of the body, such as joints or kidneys, by means of a toxin, which presumably circulates through the blood stream. Such a toxin, however, has never been demonstrated. Foci of infection have been assumed to play a role in many diseases, such as arthritis, iritis, rheumatic fever, nephritis, heart disease and bronchiectasis. It is probably in connection with rheumatoid arthritis, however, that the theory of focal infection has been most intimately associated.

The microorganism most frequently involved in focal infection is the streptococcus, either hemolytic or viridans. However, any pathogenic microorganism can presumably play the active role. Every infection has an original portal of entry through which the pathogenic bacteria gain access to the body. The portal of entry may be the site of a very fleeting infection, such as an acute coryza or influenza; and it may be through a chronic focus, such as chronic sinusitis or an apical abscess in a tooth.

Many of us who originally accepted the theory of focal infection with enthusiasm have watched with interest and some trepidation its rapid development in the various fields of medicine but are now wondering if the time has not arrived for a revaluation of the whole theory. Many thoughtful students today question seriously its validity, and some are quite willing to throw it completely overboard. This is particularly true in Europe where the idea of focal infection has never met with enthusiastic acceptance. But even in America, the home of focal infection, scientific men are becoming a little wearied of the universal acceptance of a theory as though it were an established fact. For example, one of our leading pathologists has satirically described a focus of infection as "anything that is readily accessible for surgery." Another colleague remarked that the present medical epoch would probably go down in history as the "Era of Focal Infection."

Certainly, in spite of all we have learned about focal infection, arthritis is still a very prevalent disease.

A few years ago Angevine and I made an analysis of 200 consecutive cases of typical rheumatoid arthritis encountered in private practices.

The organ upon which the greatest attention has been "focused" was the readily accessible tonsil. The tonsils had been removed in 92, or 46 per cent, of the cases on account of arthritis although only about 15 per cent gave any history of tonsillitis or sore throat. The operation had no effect upon the course of the disease in 86 cases, and caused a severe exacerbation in two instances. There was temporary improvement in four cases. In no instance was the course of the disease arrested or the patient cured. In one instance the operation upon infected tonsillar stumps appears to have been the precipitating cause of the onset of the arthritis.

The problem of infection of the teeth and gums is a difficult one. Fifty-two patients had had some, and in many instances all, of their teeth extracted on account of arthritis. There was no benefit in 47 cases, and three patients reported a flareup of the pain in their joints following tooth extraction.

The sinuses received less attention. Thirty cases gave a history of sinus disease, and 12 had been treated for sinusitis on account of arthritis before coming under our observation. The

treatment was of no benefit in 10 cases and in two there was an exacerbation of the disease.

When first seen by us 27 patients had what was considered to be an infection of the tonsils or remaining tonsillar stumps. This diagnosis was confirmed in most instances by a rhinologist. Twenty of these cases were treated; 13 remained unimproved or became worse, and there was temporary improvement in only seven cases. This improvement lasted from one week to several months.

At the time of examination only 11 of the 200 cases gave evidence of an active sinus infection. Five of these cases were treated, all without benefit.

The group of patients seen by us had exceptionally fine teeth, and most of them had had periodic dental examinations so that few infected teeth were found. In only three cases was additional dentistry performed. There was no benefit reported in any of these cases.

From our studies the following conclusions were drawn:

1. Arthritis was produced in only 11 of 100 rabbits when injected by other than the intravenous route. To accomplish this it was necessary to use large doses of a suitable strain of streptococcus as well as a most susceptible animal.

2. Arthritis developed only in those animals from which streptococci were recovered from the blood stream shortly after injection.

3. In rabbits the gums were a particularly favourable site for the absorption of bacteria.

4. Repeated injections of bacteria caused no more arthritis than a single injection.

5. It was difficult to establish a chronic persistent focus of infection in rabbits.

In my introductory remarks I have stressed the popularity of the focal infection theory and how this popularity has led to its very wide application in the modern practice of medicine and surgery. Indeed, focal infection has become such a fetish that the specialist feels almost duty bound to discover a focus in his chosen field when the internist, in search of a diagnosis or an explanation for certain symptoms, turns to his specialized colleague for help. This is particularly true when we attack the problem of arthritis.

The reaction of the internist to these reports from specialists will vary according to his own platform concerning focal infection. If he is radical, he will have everything of even a suspicious nature removed. If he is conservative, he may ignore these reports completely and treat the patient instead of the focus.

The point we wish to stress, however, is that in the final analysis, these decisions should be made by the internist rather than by the specialist, and physicians should exercise a more conservative attitude regarding the treatment of tonsils, teeth and sinuses in rheumatoid arthritis than they have in the past.

An obvious focus of infection should usually be removed, provided the health of the patient permits such removal without too much risk of disaster. If the tonsils are inflamed, it is better to wait several weeks until the activity of the infection has subsided before removing them.

The same applies to all operative procedures in the presence of the various acute infectious diseases, especially rheumatic fever. If many teeth are infected only one or two should be extracted at a time. A great many patients should receive a transfusion of blood before operation. In arthritis it may be wise to remove tonsils which are diseased and to treat active sinus infections, not because of their proved relationship to the arthritis, but because anything which improves the health of the patient will probably be of some benefit in overcoming the arthritis. The decision regarding removal of a focus of infection must usually be made eventually by the internist after consultation with the laryngologist and the dentist.

BURNING SENSATION OF TONGUE

From J. A.M.A.: 139:343 *Jan.* 29, 1949, *per J. of D. Medicine*

To the Editor:—A patient, 37 years old, has had good general health. She is high strung and becomes excited easily. Six weeks ago she complained frequently of a burning sensation on the lower lip. This soon involved the tip of the tongue. Her tongue felt as if she had eaten some spicy or hot food. She was not anaemic. Examination of the tongue and lips was negative. Thinking she might have gastric hypoacidity and thiamine deficiency I gave her a prescription containing hydrochloric acid and nicotinic acid. This did not seem to change her complaint. Gastric analysis was essentially normal and did not indicate hypoacidity. Burning sensation now involves the entire tongue, and she feels a hot burning sensation down the pharynx to the esophagus. I have treated her with diphenylhydantoin sodium without results and have also given her bromides for nervousness. She has stopped smoking. I would appreciate suggestions. M.D. Missouri.

Answer.—The impression of psychoneurosis is possibly correct, with local irritation of some sort to be ruled out as a cause or associated factor. The bilateral, progressive burning sensation of the lip, tongue and throat, in a nervous woman of 37, in the absence of visible inflammation, anaemia or response to therapy suggests an abnormality which may be present in a situational neurosis, menopause, hysteria or phobia.

Infection, gastrointestinal and systemic disorders and allergy seem to be excluded; the site is correct for the last named, but the constancy is against it. Local causes could include an irritant food or beverage, an irritant mouth wash, excessive smoking and new dental work (with a difference of electric potential between dissimilar fillings).

Several measures could be tried after consideration of the previous suggestions. A continued ban on smoking, restriction to bland food and drink; the use of a dilute bland or astringent mouth wash, reassurance, in case of cancerophobia, ½ grain (80mg.) of phenobarbital three times a day and observation to note an obscure cause are suggested. If the dosage of nicotinic acid was not high, she might be given 100 mg. of nicotinamide orally per day for two weeks. If the burning is associated with dryness, it has been suggested that a trial of neostigmine bromide (7.5 mg. three times a day after meals) will increase the secretions and burning. If the case seems functional, obtain the help of a neuropsychiatrist.

THE SELF-CURING FILLING PLASTIC

by RALPH HOWARD BRODSKY, D.M.D., New York City.

Condensed from Dental Items of Interest, May 1949.

During the past year I have been conducting laboratory and clinical studies in the use of a methyl methacrylate compound (a monomer and polymer mixture which sets or polymerizes in the mouth in 10 minutes) to be used for fillings and tooth restorations, with rather startling results. In the course of the various laboratory tests, it was observed that the absorption and solubility figures obtained are about ten times less than the specified maximum values in the A.D.A. Specification No. 12 for denture acrylics. (There are no specifications as yet for a filling plastic.)

My experience with this methyl methacrylate, involving more than several hundred restorations, includes the following:

1. Restorations involving any or all surfaces of the teeth such as cervicals, occlusals, mesials, or distals, mesioclusals, mesioclusodistals, etc.

2. Plastic inlays made by the indirect method. Undercuts then were pre-

pared in the cavity and the inlay cemented with the same shade of this plastic material which formed a bond with the inlay and was locked in by means of the undercuts.

3. Facings on inlays, cast crowns (new and old), or bridges (both in or out of the mouth).

4. Jacket crowns—either direct or indirect. One of the difficulties with acrylic jackets and inlays in the past has been their occasional popping out of position. Here I was able to employ undercuts and lock them in position. (In the indirect method, I used the same material and shade for the cementation instead of the other types of cements.)

5. Windows in metal restorations (gold or silver amalgam).

6. Acrylic bridges or repairs (either in or out of the mouth).

7. Splints (either surgical or periodontal).

8. Bite-opening restorations.

9. For cementing inlays, crowns or bridges.

10. Replacing broken or lost teeth from dentures or bridges.

11. Where acrylic restorations have worn down, I believe they can be built up in not many minutes with this plastic. There is still some question as to how hard a filling should be. Some wish it to be harder than gold, some softer, while others are dissatisfied with the various golds. Actually, there are instances in which a very hard material might be advantageous. For example, many of the periodontists seem to favour the latter, for the occlusal impact against the softer filling reacts more kindly toward the tooth supporting tissues. However, the relative simplicity in building up the occlusal surface on a restoration made of this new plastic renders the question less important, regardless of whether this may be required in six months or ten years.

I have employed cavity preparations similar to those employed for the synthetic silicate restorations. Undercut or retentive areas are desirable. The margins should not be featheredge.

Any satisfactory method of cavity sterilization is acceptable, provided no oily or other residue remains. Oils or fluids which come into contact with this plastic will interfere with its polymerization or setting. Vital teeth should be protected with adequate insulation, either with a good cavity lining, an oxyphosphate cement, or a gold foil pellet flattened and held in place with cavity liner.

"I suppose it was the promise of social security that first tempted me."

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Editorial

AN INVITATION TO NEWFOUNDLAND DENTISTS

by G. VERNON FISK, D.D.S., President of the Canadian Dental Association

As President of the Canadian Dental Association it is my privilege to welcome the dentists of Newfoundland into our Canadian professional life and to extend to them a cordial invitation to become active participants in the activities of the Canadian Dental Association.

The members of the dental profession of the other nine provinces may learn much from the members of the dental profession of our newest province, for dental organizations existed in Newfoundland for some years before Dentistry was organized as a profession in Canada. On the other hand, because of its strength, the Canadian Dental Association has much to offer our dental confrères of our new insular province.

Some Newfoundland dentists are already associate members of the C. D. A. and are kept informed upon the wide scope of its activities through our official publication. But in order that all dentists of that province may become conversant with the splendid work of our National dental body, and as a gesture of good will, the Board of Governors of the C. D. A., at the annual meeting held recently in Saskatoon, instructed the Business Manager to send, to each Newfoundland dentist, the Journal of the C. D. A., commencing with this issue and continuing until the end of this year.

This action by the Board of Governors will undoubtedly create a desire for closer affiliation with our National dental body. It may therefore be pertinent to outline briefly, for the benefit of our Newfoundland confrères, the procedure through which active membership in the C. D. A. may be

effected. An application accompanied by a list of members is made by the Provincial Dental Legal Body. The Constitution and Bylaws of the Association provides for the approval of such application by the members of the C. D. A. at a meeting regularly assembled.

Accordingly, on behalf of the Officers and Board of Governors of the C.D.A., an invitation has been extended to the Newfoundland Dental Board to make formal application to become a Corporate Member of the C. D. A. Acceptance of this invitation by the Newfoundland Dental Board would be an effective means of unifying and strengthening the dental profession in Canada.

May I assure our Newfoundland confrères that this invitation carries with it the hearty endorsation of every member of the Board of Governors, and I feel confident, expresses the sentiments of all the members of the dental profession of the other provinces.

BOOK REVIEWS

How To Become A Doctor by George R. Moon, A.B., M.A., Examiner and Recorder, University of Illinois Colleges of Medicine, Dentistry and Pharmacy.

131 pages; illustrated. (April 13, 1949). $2.00

The Blakiston Company, Philadelphia 5, Pa., Toronto 2, Canada.

The method of acceptance for students into the health professional schools has become one of considerable interest owing to the large number of applicants with few accepted during recent years. This book sets forth in detail the requirements and also the factors which influence admissions committees.

Many misconceptions, which exist in the minds of those not accepted, are clarified. Primarily, the subject matter is intended as a guide for those students who propose to enter a medical, dental or veterinary professional school. The carelessness of applicants in filing applications is pointed out with examples — a well recognized fact by anyone who has been a member of an admissions committee. It always seems remarkable that applicants are so thoughtless when acceptance is such a vital matter to them.

The content of the book is so arranged that the major portion deals in detail with medicine. Dentistry follows: "Most of the foregoing statements about the application for the study of Medicine, relate equally well to an application for the study of Dentistry." In general the main difference in the courses are given. The only criticism is that of the psychological effect upon the prospective student for the dental course, which may be caused by the order of presentation.

However, the book serves a useful purpose and if applicants followed the instruction given, admissions committees would have a much happier task. Canadian Schools are referred to in part, there being only three dental schools of Canada mentioned. Generally speaking, the information given applies equally well in Canada as in the United States.

D. W. GULLETT

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Oral Bacterial Infection, Diagnosis and Treatment by Lyon P. Strean, M.Sc., Ph.D., D.D.S., F.A.P.H.A. Director of Research Novocol Chemical Mfg. Co. 1949. 10 pages, 57 illustrations.

The book starts with a brief description of staining, cultivation and bacterial characteristics of micro-organisms.

The bulk of the text is devoted to a concise description of the commoner bacteria, fungi, rickettsia and viruses. This is presented under the following general headings:—morphology and staining, cultural characteristics, resistance, pathology, diagnosis and treatment. At the end of the book there is a short discussion of antibiotics and their dental application, followed by a chapter on immunity and hypersensitivity. There is no bibliography.

The book is not a text-book of bacteriology,

but rather, as the author himself states, it is a ready-reference providing the essentials of bacterial infection. H. A. HUNTER

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Review of Dentistry by James T. Ginn, B.S., D.D.S. Professor and Chief of Division of Operative Dentistry, Professor of Oral Medicine, University of Tennessee College of Dentistry, Memphis; Formerly Assistant Professor of Pathology, Histology, and Radiology, Loyola University of the South, School of Dentistry, New Orleans. Formerly a Carnegie Fellow in Dentistry, University of Rochester, School of Medicine and Dentistry, Rochester, New York.

810 pages Price $6.25

C. V. Mosby Company, St. Louis, Mo.

Canadian Agents: McAinsh & Co. Limited, Toronto.

Treatment of a subject by the question and answer method has become a popular method of presentation. This book is the second to appear within recent months dealing by this method with the subjects contained in the dental curriculum.

Review of Dentistry is an up to date ready reference book, useful to those preparing for professional examinations and also practitioners and students. The book has been carefully compiled by well-known authorities in respect to each subject. The answers are concise and definite. The precise information is made readily available, which in many cases might require much searching through the literature.

As stated in the preface, a demand exists for this type of presentation. As a ready reference, the book serves its intended purpose but the serious student would demand fuller explanation in answer to his question. For the graduate a review of dentistry is offered in a most interesting manner. D. W. GULLETT

ROYAL CANADIAN DENTAL CORPS NEWS

The following officers commissioned as Second Lieutenants in the Canadian Army Active Force a year ago at the commencement of their final year in dentistry, have been taken on strength of the Corps on graduation. 2/Lts Charman and A.R. Ramsay, McGill University; 2/Lt J. A. A. Patenaude, University of Montreal; 2/Lts H. G. Chartrand, L. V. Crowley, H. A. Ferguson, J. E. Hughson, L. R. Pierce, G. C. Russell and W. R. Thompson, University of Toronto; and 2/Lts L. A. Richardson and G. E. Windsor, University of Alberta.

2/Lt F. D. Charman, 30, was born in Wallace, N.S., and moved to Truro in early life. He took his senior matriculation at Truro and entered Mt. Allison University in 1939, graduating in 1942 with a B.A. degree. He joined the R.C.A.F. in October 1943, served as a Pilot Officer in Canada and United Kingdom, and was retired in March 1945. He is married with one child.

2/Lt A. R. Ramsay, 38, was born in Eden, Man., moved to Neepawa in early life where he received his senior matriculation. He graduated from the Normal School, Winnipeg, taught school for two years at Two Creeks, Man., and then was a reporter for the Neepawa Press. He joined the R.C.A.F. in October 1940 as a wireless mechanic and was an instructor in Wireless Theory at the R.C.A.F. Wireless School, Montreal. He received his discharge in September 1945 with the rank of Flight Sergeant. He is married with one child.

2/Lt J. A. A. Patenaude, 29, is a native of Valleyfield, Quebec. After matriculation in Valleyfield he attended University of Montreal from 1942 to 1943 in pre-med. He joined the R.C.A.F. in October 1943, qualified as a Sergeant Air Gunner and received his discharge in January 1945.

2/Lt H. G. Chartrand, 29, is a son of Mrs. H. A. Chartrand and the late Dr. H. A. Chartrand of Ottawa. He joined the Canadian Dental Corps in February 1944, was employed as a dental assistant with the rank of Corporal and received his discharge in July 1946.

2/Lt L. V. Crowley, 24, is a son of Dr. L. D. Crowley of Windsor, Ont. Following graduation from High School in 1943 he attended the University of Toronto for one year as a student in 1st year Dentistry. He enlisted in the R.C.A.F. in May 1944 and received his discharge in December to join the Fleet Air Arm. He proceeded overseas in January 1945 and commenced training as a pilot but repatriated to Canada after cessation of hostilities and before completing his course.

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received his discharge in October 1945 as Naval Airman, Class II.

2/Lt H. A. Ferguson, 25, is a resident of Toronto. He enlisted in the R.C.A.F. in January, 1943, qualified as a pilot and was commissioned on graduation. He was retired in January, 1945 with the rank of Pilot Officer.

2/Lt J. E. Hughson, 25, is also a resident of Toronto. After completing senior matriculation he was enrolled in the University of Toronto from 1942 to 1944. He enlisted in the Royal Canadian Navy Volunteer Reserve in June, 1944 as an ordinary seaman, was selected as an officer candidate in January, 1945, qualified as Sub-Lieutenant in August 1945, and was retired in September 1945 in the rank of Sub-Lieutenant. 2/Lt Hugson is married with no children.

2/Lt L. R. Pierce, 27, is a native of Parkhill, Ont. He joined the Canadian Dental Corps in April 1942 and trained as a dental technician. He received his discharge in October 1945 with the rank of Sergeant. He is married with no children.

2/Lt G. C. Russell, 29, is from Nelson, B.C. After matriculation he studied pre-dental at the University of Idaho from 1939 to 1941. He joined the Canadian Dental Corps in October 1941 and trained as a dental technician. He received his discharge in September 1945 with the rank of Sergeant.

2/Lt W. R. Thompson, 26, is from Campbellford, Ont. He completed senior matriculation in 1941 and was enrolled in dentistry in the University of Toronto until 1943. He enlisted in the Canadian Dental Corps in June, 1943, transferred to the R.C.A.F. in December of that year and trained as a navigator. He was promoted to Pilot Officer in March 1945 and was retired in April 1945.

2/Lt L. A. Richardson, 24, was born in Viking, Alta. He completed High School matriculation at Ryley, Alta. and Strathcona High School, Edmonton. He enlisted in the R.C.A.F. in April, 1944 and qualified as Navigator in March, 1945. He was discharged in May 1945 in the rank of Sergeant.

2/Lt G. E. Windsor, 27, is a native of Kamsack, Sask. Completing senior matriculation in 1940 he enrolled at the University of Alberta for one year, transferred to the University of Saskatchewan and received his B.A. in 1943. He enlisted in the R.C.A.F. in August, 1943, and qualified as Navigator. He was commissioned as Pilot Officer in March, 1945, and was retired in April 1945. He is married with no children.

CANADIAN DENTAL ASSOCIATION NEWS

(From the Office of the Secretary)

British National Health Scheme Drain on Exchequer—Too Great Dental Fees To Be Reduced 20% Cut Proposed

The Minister of Health, Mr. Bevan, announced in the House of Commons in June that he had concluded that reductions in the scale of fees now payable to dentists under the National Health Service are called for as a matter of urgency. The reasons which have influenced him in this decision are explained in a memorandum which has been circulated to the Executive Councils under the service.

The memorandum contains an analysis of the earnings of 5,078 dentists from October so u48, to March 1949. This shows that 1,066 matte earning at the rate of over £6,000 gross The ar, and of these 333 were exceeding £8,400 the ma These figures disregard the cut of 50 cine. L going st study of application general the per cent in dental earnings over a rate of £400 monthly (imposed in February).

The main points of the Minister's proposals are:—

Reductions amount overall to about 20 per cent of the gross fees.

The new scale will operate from June 1.

Basis of Payment

The memorandum explains that the present scale of fees was designed to produce for the fully employed, experienced, single-handed dentists a net annual income of £1,778.

The hours worked at the chairside each week taken to be the 33 accepted by the Spens Committee.

Practice expenses were generally accepted as amounting to rather more than half gross earnings, so that the proposed net income of

ey.

£1,778 corresponded to a gross income of rather more than twice that amount.

Within a few months of the starting of the service it became apparent that some dentists were earning at a far higher rate than had been intended. It was decided that while excessive earnings must be checked, there was no evidence to justify a general cut in the scale of fees. Accordingly, the partial limitation of earnings at a rate exceeding £4,800 gross a year was announced on December 9, 1948, and applied to payments made on or after February 1. This limitation permitted remuneration at the full rate up to an amount which was about 25 per cent above that based on the Spens Committee's recommendation in consideration of the long hours which dentists were working in what was then believed to be a temporary rush.

The dental organizations were invited on January 21 to appoint members to form a small working party which was asked to ascertain the average chairside time taken by general dental practitioners in England, Wales, and Scotland, (1) in the National Health Service and (2) in private practice to complete each of the types of dental treatment set out in the scale of fees.

Request to Minister

Correspondence between the Minister and the British Dental Association on the setting up of the working party is reproduced in an appendix of the memorandum.

The Minister's letter of January 28 referred to the possibility of consultations with the dental organizations about an interim revision of the scale of fees pending negotiations based on the working party's report. He did not feel able to comply with the dental organizations' request that he should undertake not to consider any reduction before that report was available.

The memorandum goes on to state that further information as to earnings has now become available.

The table below sets out the annual rate of payment authorized by the Dental Estimates Board to the 5,078 dentists taking part in the service whose earnings during the six months October 1948, to March 1949, could be regarded as reasonably reflecting an annual rate:

No. of Dentists	Range of Gross Earnings	Range of Net Earnings (assuming 52% practice Expenses)
	£	£
209	0—1,200	0— 576
712	1,201—2,400	577—1,152
1,128	2,401—3,600	1,153—1,728
1,122	3,601—4,800	1,729—2,304
841	4,801—6,000	2,305—2,880
479	6,001—7,200	2,881—3,456
254	7,201—8,400	3,457—4,032
333	Over 8,400	4,033 plus

This table takes no account of the limitation of earnings above £4,800 a year gross imposed in respect of payments made on or after February 1, and it does not make allowance for superannuation.

The memorandum points out that about 59 per cent of the 5,078 dentists were earning from the National Health Service at an annual rate above that based on the Spens Committee's recommendations and 41 per cent below that rate. It seemed reasonable to assume that additions to the amounts shown were earned from private fees by dentists in at any rate the lower income categories.

"Drain on Exchequer"

The preparation of the working party's report and the negotiation of a new scale of fees are bound to take a considerable time, and the Minister invited the dental organizations to consult with him on the question of an interim reduction in the present scale. They did not accept this invitation, and the Minister felt that he could not allow the present "unjustifiable drain on the Exchequer" to continue.

He has decided to amend the regulations to provide for a reduced scale of fees in respect of work undertaken after May 31. This scale supersedes the limitation on earnings imposed last February, which will be brought to an end on July 31.

In the following table the present and the proposed scale of fees are compared:—

	Present £ s. d.	Proposed £ s. d.
Examination and Report	0 10 0	0 5 0
Scaling	0 16 6	0 12 6
Fillings:		
Minimum	1 0 0	0 15 0
Maximum	1 17 6	1 7 6
Root Treatment:		
Minimum	2 0 0	1 10 0
Maximum	3 0 0	2 5 0
Extractions:		
1 or 2 teeth	0 10 0	0 7 6
3, 4 or 5 teeth	0 15 0	0 11 6
6, 7 or 8 teeth	1 0 0	0 15 6
9, 10 or 11 teeth	1 5 0	0 19 6
12 13 or 14 teeth	1 10 0	1 3 6
15, 16 or 17 teeth	1 15 0	1 7 6
18, 19 or 20 teeth	2 0 0	1 11 6
Over 20 teeth	2 7 6	1 17 6

General Anaesthetics:						
1 to 3 teeth	0	10	0	0	10	0
4 to 11 teeth	1	0	0	1	0	0
12 to 19 teeth	1	10	0	1	10	0
20 or more teeth	2	0	0	2	0	0
Dentures:						
Full upper and full lower	10	10	0	9	9	0
1, 2 or 3 teeth	4	17	6	4	5	0
4 to 8 teeth	5	15	0	5	0	0
9 to 14 teeth	6	1	6	5	7	6
Repairs:						
Minimum	0	18	0	0	15	6
Maximum	2	0	0	1	15	0
Crowns:						
Minimum	4	7	6	3	17	6
Maximum	9	7	6	8	5	0

Observations

1. Now, that over 90 per cent of British dentists are signed into the National Health Scheme, the government has made two moves to reduce payments to dentists:
   (a) On February 1st a limitation was placed upon incomes.
   (b) Later as shown above a drastic reduction of the fees.
2. This is an old story, much the same as has occurred in other countries; initially generous inducements to enter the service and then the cry that the dentists are out to trim the public. The main point to remember is that the individual dentist, who has entered the scheme, has lost control of his own destiny and become subject to the action of those who may, or may not, know anything respecting dentistry.

Quebec Increases Capital Grant

Official notification has been received from the College of Dental Surgeons of the Province of Quebec that beginning the first of January, 1950, an annual contribution of $10.00 per member in good standing of the College will be made to the Canadian Dental Association. The Quebec contribution has been upon an $8.00 basis up to the present time.

"Extrait du procès-verbal de l'assemblée du Bureau provincial de Chirurgie dentaire tenue à Montréal le samedi, 21 mai 1949, sous la présidence du docteur Ephrem Vinet: QUE le Collège des Chirurgiens Dentistes de la Province de Québec verse à l'Association Dentaire Canadienne, à compter du 1er janvier 1950, une contribution annuelle de $10.00 par membre en regle avec le Collège."

McGill Student Wins War Memorial Award

Announcement was made at the C.D.A. Annual Meeting that Morton R. Lang of McGill University won the first prize in the War Memorial Award for 1949. The second prize was won by William H. MacNeill of Dalhousie University.

Under the regulations governing the Award each of the five dental schools is permitted to submit three selected essays to the judges for consideration. The subject for the essay is selected by the C.D.A. War Memorial Award Committee and announced to the graduation class of each school well in advance of the opening of the fall term. The subject for 1948-49 was:

"The Relation of the Endocrines to Dental Development and Oral Health."

The winning of these awards is creditable both to the students and the schools attended by them.

C.D.A. Transactions to Be Published

Decision was made at the Annual Meeting of the Board of Governors to publish the transactions for distribution to the membership. Publication will be made in both French and English, at an early date, and a copy mailed to every member.

NEWS FROM THE PROVINCES

ALBERTA

University News

There were 20 students graduated at the University of Alberta with the D.D.S. degree this year and one student received a B.Sc. in the combined course.

The class for the session 1949-1950 will be as follows:

1st year	35
2nd year	27
3rd year	25
4th year	50

Dr. R. A. Rooney has been promoted from Assistant-Professor of Prosthetic Dentistry to a full professor.

Dr. K. A. McMurchy is going to spend a year at Columbia University, doing postgraduate work in Operative Dentistry and Gross and Microscopic Anatomy. He is on a fellowship from the W. K. Kellogg Foundation.

Edmonton Dental Society

The June Golf Meet of this Society took place on June 16 at the Highlands Golf Course. There were 42 present, including representatives of S. S. White and Company and Novol Manufacturing Company. There were several dentists from out of town including Dr. Janzen of Wetaskiwin and Dr. T. Nikiforuk of Vegreville.

A talk was given by Dr. H. Brown on fluorination of water.

As a result of the afternoon golf play, the following prizes were given out:

Total low gross ..... Dr. T. Nikiforuk
Low gross on first 9 holes.....Dr. O. M. Wright
Low gross on second 9 holes...Dr. Stan Sodgson
Most balls lost ..... Dr. A. D. Fee
Most strokes on one hole ..... Bill Jarvis

Lucky tickets for golf balls were held by Drs. Don McIntyre, George Barnett, C. Duke, W. Orobko, D. G. McKechnie, A. Ravell, and R. V. Blackmore.

All prizes were donated by Ash Temple and Company.

W.E.A.

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Passing of Miss Alexandra Macdonald

It was with the deepest regrets that word was received on June 9, of the passing of Miss Alexandra (Sandy) Macdonald in Edmonton at the University Hospital, where she had been at patient for about 2 months. The daughter of Dr. and Mrs. T. Forrester Macdonald, she had been a most outstanding figure skater. She belonged to the Glenora Skating Club for many years before she made her debut in an American Ice Show. In 1940, with Harold Hartshorne, she won the North American Dance Championship on ice. In 1935, she was presented to Their Excellencies the Earl and Countess of Bessborough at the first State Drawing-Room of the season in Ottawa.

Her death was a great shock to her legion of friends and, to her parents, Dr. and Mrs. Forrester Macdonald and her brother, Dr. Vance Macdonald, a neurosurgeon of Edmonton, goes the sympathy of all who knew her.

W.E.A.

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Edmonton Dental Nurses' and Assistants' Association

The Edmonton dental nurses and assistants were well represented in the Western Canada Dental Convention. The girls, who were fortunate to make the trip, were pleased with the well-planned clinics and lectures and, without exception, all were impressed by the warm hospitality shown them by the Saskatoon dental nurses and assistants. Many of them made lasting friendships with these girls and all felt that the trip was well worthwhile.

The last meeting of the season took the form of a dinner party to honour Mrs. Mary Edwards, the energetic and wonderful president of the Canadian Dental Nurses' and Assistants' Association.

Mrs. Edwards was presented with a pin to signify honorary membership in the Association after which she spoke for a short while.

During her over-night stay in Edmonton, Mrs. Edwards was the guest of the president, Miss Jean Rogers.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

At Saskatoon June, 5, Miss Kay Hoffard our President was elected President of the Western Canada Dental Nurses' and Assistants' Association, Miss Margaret Kitching Recording-Secretary, and Miss Ethel Brown Treasurer.

F. JEFFREY

ONTARIO

Sault Ste. Marie

The Sault Ste. Marie Dental Association was host to the Upper Peninsula of Michigan Dental Association, and clinicians sponsored by the Michigan State Dental Association and the Michigan Department of Health, in the Windsor Hotel on June 6 last.

Dr. F. C. Hocivar, President of the Sault Ste. Marie, Michigan, Dental Association acting as chairman of the meeting, thanked the Canadian Association for the hospitality that had been shown the members from Michigan, and introduced the guests — Dr. Henry C. Gerger of Lansing, Michigan, Executive Secretary Michigan State Dental Association.

Dr. Chester Tossey, Lansing, Michigan, Assistant Director of the Michigan Department of Health. Dr. L. Kobayski, Honolulu, Hawaii.

It was pointed out that the 1949 program was built around Cancer, the second greatest

death-dealing disease in the United States. It was estimated that 10 per cent of all malignant neoplasms in man and 2 per cent in women occur in the oral cavity. The dentist therefore must suspect every questionable lesion as it is his responsibility to detect signs and symptoms of oral cancer and to refer the patient to a qualified specialist for treatment.

The first clinician of the afternoon speaking on Oral Lesions was Dr. George W. Christiansen of Detroit, Michigan, President of Michigan State Dental Association, Diplomat of the American Board of Oral Surgery, Past President and member of the American Society of Oral Surgeons. Dr. Christiansen's discussion included lesions of the soft and bony tissues of the mouth and associated parts. Both benign and malignant types were considered with illustrations by kodachrom slides.

Dr. Maury Massler, Chicago, Illinois, Associate Professor of Graduate Pedodontics and Director of Child Research Clinic, University of Illinois, speaking on "Oral Infections, Differential Diagnosis and Newer Methods of Treatment," was the next clinician. Dr. Massler pointed out that the oral flora contains a multitude of pathogenic as well as non-pathogenic organisms. Haemolytic streptococci occur in the oral cavity with as great frequency as upon the throat. He stated that many streptococcal and virus infections which frequently occur in the mouth are mistaken for and treated as Vincent's infections.

A consideration of the streptococcal, staphlococcal, virus and Vincent's infections of the mouth were presented with emphasis on differential diagnosis and newer methods of treatment.

The meeting adjourned at 6.30 p.m. for refreshments and a luncheon in the Oak Room. After dinner Dr. George W. Christiansen as President brought greeting from the Michigan State Dental Society and introduced Dr. LeRoy M. Ennis, representing the American Dental Society. Dr. Ennis stressed the fact that all dentists should fortify themselves with information concerning socialized dentistry that they might answer intelligently questions asked by their patients. He pointed out what a dastardly situation would result if this communistic dictatorial leadership should ever engross this free nation of ours.

The evening program was conducted by Dr. LeRoy M. Ennis, Philadelphia, Penn., Professor of Roentgenology, School of Dentistry, University of Pennsylvania, Author of the text book, "Dental Roentgenology," Member of the Board of Trustees, American Dental Association. His subject was "Interpretation of Roentgenograms of Interest to the General Practitioner." He pointed out that realizing the important role x-ray plays in the routine practice of Dentistry, and also the greater importance of correct interpretation, it becomes necessary to constantly review the subject. The material presented was designed to bring the general practitioner face to face with problems met in every day practice.

The Canadian Sault Society thanked the clinicians and members of the American Association for the very fine clinics that had been displayed and hoped that they would have the privilege of again being hosts at a future time.

VANCE HART
Sault Ste. Marie

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New Scholarship Presented
Faculty of Dentistry, Toronto

At the class of 2T3 reunion dinner held on May 16 at the Royal York Hotel, Toronto, one of the class members, Dr. Francis J. A. Daly of Cleveland, Ohio, presented Dean Roy Ellis with a cheque for $4000.00. This sum is to set up a scholarship in memory of Dr. Daly's late wife, Mary Adele Daly who died in December 1948.

The scholarship is to be known as the Mary Adele Daly Memorial Scholarship. Details and conditions of the award have not yet been determined by the University but will be known later.

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Grey-Bruce-Dufferin Dental Association

At the twelfth annual summer meeting of this association 41 members and guests were present to hear Dr. T. R. Marshall of Toronto, Dr. M. C. C. Bebee of Owen Sound and Jack McTavish of Toronto.

The following officers were elected: President, Dr. C. J. Baxendale of Owen Sound; Vice-President, Dr. J. A. McArthur of Markdale; Secretary, Dr. Milton Bye of Owen Sound; Drs. M. P. Hawton, Collingwood; E. L. Hardman, Wiarton; J. C. Guthrie, Port Elgin; W. G. Bruce, Kincardine and E. J. Weiler, Mildmay, were named as members of the Board of Directors.

HOUSE OF COMMONS

Eastern Ontario Dental Convention
"From Us To You"

We hear and read much about Paris, Rio de Janeiro and Washington, but nevertheless, I feel that among the beautiful capitals of the world, our Ottawa can hold her own (with or without the Greber plan).

In the Spring-time, Ottawa is just a vision of perfect loveliness—tender young trees here and there, flowering almonds, and millions of red, white, violet, pink, and yellow tulips, everywhere—along the Canals, the driveways and around the War Memorial and the Parliament Buildings.

It is pathetic to think, just how little we Canadians do know about our lovely Capital. How few of us have ever visited its museums; either the National one or the little Historical Museum on Nicholas St. How few of us have had the pleasure of wandering around and about the Parliament Buildings; seeing the Hall of Remembrance, the Senate Chamber, the Library, the Confederation Building, the famous Peace Tower and the Governor General's residence.

Here, in Ottawa, where the North seems to begin, you can be privileged to see and visit most of the foreign and Commonwealth Embassies. Their attachés (with few exceptions, I would think) welcome visitors. They would like us to know something about their countries, and they are more than willing to enlighten us.

There are ever so many lovely drives that can be taken—to Rockcliffe, with its lovely homes and gardens, to Kingsmere, to the picturesque Gatineau Hills, to the quaint village of Manotick, and to agricultural Kemptville; or you can simply cross the river to Hull and find yourself among our fellow Canadians of different racial origin. To any of us, who has never been to Quebec, a visit to Hull should prove enlightening and educational.

In Ottawa there is wonderful shopping and easy transportation. The stores have a "New York look" about them. The hotels and eating places are excellent. You can get lost exploring the Chateau Laurier, but every minute of it will be exciting.

This then is Ottawa, our National Capital. And what is more important is that the Eastern Ontario Dental Association has decided to

DR. RALPH FOSTER
President Northern Ontario Dental Association

hold its convention there, on September 11, 12 and 13 at the Chateau Laurier. Apart from the fact that it is the duty of every Canadian to visit his National Capital sometime, we promise you a good Convention and the friendliest hospitality.

Don't forget the dates—Sept. 11, 12 and 13 at the Chateau Laurier, Ottawa.

for the Publicity Committee
A. A. ANTONI
E.O.D.A.

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Northern Ontario Dental Association Convention Program

September 10, Empire Hotel, North Bay.

9.00- 9.45—Registration

10.00-12.00—Dr. Douglas Tanner, University of Toronto. Subject: X-ray Interpretation and Oral Surgery

12.30— Luncheon
Speaker—Dental Public Health

2.00- 4.00—Dr. O. D. Legge, Sudbury
Subject—Centric Relations with Mandibular Positioner

4.15— Business Session

7.00— President's Banquet and Dance

R. A. TORRANCE, Secretary

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The Dental Laboratories Association of Ontario Convention

The Sixth Annual Convention of this Association opened on Saturday, May 15 at the Royal York Hotel, Toronto with President Wm. Taylor presiding. The contribution made by the Toronto Study Club of Dental Technicians in sponsoring table clinics was very much appreciated. Those taking part were:

Art Whitely	Whitely Floating Spring Press
Sam Furie & Percy Singer	Duplicating Models with Nobiloid
Walter Wood	Hollenback Vacuum Investing
H. G. Tebbutt	Esthetics to the Complete Denture

The other outstanding Technicians who contributed so much to the Convention are recognized for their ability to understand dental laboratory problems and the fine art of technical skill, which always finds a ready appreciation at our meetings. These visitors were:

Mr. George Fine, Williams Gold Refining Co., Mr. J. C. Butler, L. D. Calk Co., Dr. Val Hudson, Dentists' Supply Co., Mr. M. S. Montague, Cosmos Dental Co.

Among the well represented delegates from other towns and cities were the group from Montreal, Quebec, with Mr. P. Hugros, President of the Montreal Study Club, and Mr. Ernest Bulley, President of the Association of Dental Technicians of Quebec.

At the annual business meeting, the following officers and executive board members were elected:

President	Wm. Taylor, Oshawa
Vice-President	H. G. Tebbutt, Toronto
Secretary	K. M. Daly, Toronto
Treasurer	J. R. Price, Toronto
Board	D. Rollaston, Chas. E. Spence, Chas. L. Daly, H. H. Posen, C. K. Mellish, B. S. Sweet, W. Woods, all of Toronto and D.

Taylor, Kingston, A. E. Smith, Simcoe, L. V. Gosso, London W. Roy, Sudbury, S. Hosken, Hamilton, D. A. Parent, Windsor.

In appreciation of their faithful service and untiring efforts in promoting the association as President and Past President, Wm. Taylor and Chas. Spence were each presented with a cheque from the association.

Mr. Chas. Spence, Chairman of the governing board of Dental Technicians of Ontario, gave a report of the Board's activities during the past year, including the number of new members who qualified by apprenticeship and examination as Registered Dental Technicians in Ontario.

On Saturday night the members, guests and their ladies filled the Tudor Room of the Hotel to enjoy a splendid program. Will Walker introduced the guests at the head table and Dean R.G. Ellis of the Faculty of Dentistry University of Toronto, responded on behalf of the Dental Board and Colonel Alexander responded on behalf of the Dental Trade Association. It was very evident that all present enjoyed the address given by Rev. Norman Rawson of Hamilton. The entertainment, under the supervision of Jim. R. Price, was of the best.

At the Luncheon on Monday, the members had the unique privilege of hearing Colonel David Croll, M.P. and former Mayor of Windsor, give one of his outstanding discussions of international affairs.

WM. T. WALKER

BRITISH COLUMBIA

Dental Organizations in B.C.

In British Columbia, as in several other provinces of the Dominion, two province-wide organizations exist to represent the dental profession. In the past, some confusion has existed as to which of these bodies should undertake the handling of matters of general interest to the profession. As a result of the annual meetings of both bodies, held during the recent convention, the rule has been established that the College of Dental Surgeons shall handle all matters of a legal nature; the administration of the Dental Act; the licensing and control of candidates for admission to practice in the province, as it has done in the past, but that all matters of a non-legal nature shall be handled by the non-legal body, the British Columbia Dental Association. Following this decision, it has been possible to clarify and enlarge upon the duties of committees of the latter organization.

A strong Dental Health Committee of the British Columbia Dental Association has been formed, consisting of the following members:

Dr. J. Ewart Gee.....Victoria, Chairman
Dr. D. J. Sutherland.....Vancouver
Dr. L. E. English.....Kamloops
Dr. A. Poyntz.....Victoria
Dr. L. Alexander.....Haney
Dr. William Miller.....Vancouver
Dr. J. A. Chambers.....New Westminster
Dr. Emery Jones.....New Westminster (ex-officio)
Dr. L. G. Robinson .....New Westminster (ex-officio)

Immediately following its first meeting, representatives of the Committee met with the provincial health authorities, for a preliminary discussion on the subject of the co-relation of plans of the new government Department of Preventive Dentistry, with those of the profession. The representatives reported a successful meeting, with every hope of a satisfactory co-operation of the two groups in future dental health activities in the province.

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New Practitioners

Thirty-four candidates presented themselves for the recent board examinations at Vancouver — the largest class in the history of the province. Most of these were graduates of University of Toronto, or of the Oregon School of Dentistry. England, Alberta, and Nebraska were also represented. Many of the candidates hail from points along the northern coast, and from the various points in the interior, and it is hoped that the result will be the opening of offices in northern and central parts of the province where dental services are badly needed. The past few years have seen a tremendous influx of new practitioners into the metropolitan areas, and the development of new practices in these crowded centres is no longer a simple matter.

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Ladies' Achievement

Almost incredible, though vouched for by good authority, is the fact that the ladies' committee of the recent provincial convention handed back to the treasurer a cheque for over one hundred dollars of funds not required by

LEA F. ALLANACH, B.Sc., D.D.S.
President of New Brunswick Dental Society

their committee. The ladies' program was excellently handled by the president, Mrs. G. A. C. Walley, the secretary-treasurer, Mrs. Charles Whitworth, and the various members of committees. This outstanding achievement was really something for the books, in more ways than one.

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Golf Meeting

The annual golf meeting of the British Columbia Dental Association, recently held in truly Pacific Coast sunshiny weather was held at the Point Gray Golf Club. About fifty or more members turned out.

Dr. Dick Butler, of New Westminster, had low gross, winning the Association Trophy and first prize. Runner-up was Dr. Bill Newitt, and second runner-up was Dr. O. Campbell.

First, second and third low net prizes were won by Drs Zack, Moscovich and Warshawski, respectively.

C.D.A. Journal in Spain

The Journal of the C.D.A. does seem to get around. The writer received a letter from a Doctor Luis Cervera, of Barcelona, Spain, requesting a copy of the News Bulletin of our Association. Several copies of different issues were sent to him, and his acknowledgement has just been received. He tells us that the children of Spain receive excellent care in the dental school clinics, or through personal dentists, as the parents may choose. Routine examinations are conducted in the schools. Apparently foreign exchange difficulties prevent the dentists of that country from imporing much of modern equipment and materials, such as they see described in current literature.

NEW BRUNSWICK

Maritime Dental Convention

The dentists of the Maritimes will meet in convention at the Algonquin, St. Andrews, N.B., August 31 to September 2.

The following essayists and clinicians will take part:—Dr. Stephen Mallett, Oral Surgeon, Chief of Dental Dept., Boston City Hospital; Dr. Irvine R. Hardy, Prosthodontist, in charge of the Dept. at Tufts College; Dr. George Hall and Dr. A. L. Keltie, speaking on the Davis Technique for Synthetic Fillings; Dr. Roy Ellis, Dean, Faculty of Dentistry, University of Toronto and Dr. D. P. Mowry, Dean, Faculty of Dentistry, McGill University.

The following will give table clinics:—Dr. J. P. Coupland, Ottawa, on "Reduction of Radiographs;" Dr. Reginald Wynn, Montreal, on "Orthodontia;" Dr. Robert Ogilvie, Fredericton, on "Gold Foil;" Dr. R. E. Lussier, Montreal; Dr. J. W. MacLeod, Truro, on "Staining Acrylic Teeth;" Dr. L. I. Duffy, Charlottetown, on "Rubber Dam;" Dr. John Merritt, Halifax, on "Jacket Crowns."

Entertainment includes golf, swimming, tennis, dancing, bridge, deep-set fishing and scenic drives.

Make reservations now through Dr. Howard MacDonald, 161 Charlotte St., Saint John, N.B.

Unfortunate is the lot of that man, who can look round the wide world, and exclaim with truth, I have no friend;—truly society is the balm of human life.—Charles Lamb.

EMPIRE NEWS

GREAT BRITAIN

The National Health Service

Excerpts from Address by E. Wilfred Fish, C.B.E., M.D., D.D.Sc., F.D.S.R.C.S. Eng., before the Dental Board of the United Kingdom, British D. Jour., May 20, 1949.

The Health Service has been in operation for almost a year, and it has been calculated that 90 per cent of the dentists who are in active general practice in England and Wales, and a still higher proportion of those in Scotland, are taking part in it. For the first time in any country in the world, any dentist is now free in Britain to examine any person who presents himself and to proceed to give him the benefit of sound conservative or remedial dentistry, regardless of his ability or willingness to pay. That sounds like the fulfilment of our highest aspirations, yet many dentists find themselves in a quandary.

The difficulty has arisen because the demand from almost every class of the population and for every type of dental service has suddenly, though, of course, quite naturally, increased. The profession, in no small measure confused and at first with some trepidation, which can hardly have been allayed by subsequent developments, have made enormous efforts to meet this increased demand, and there can hardly be any members of the community who have worked harder in the last year than the dentists.

When faced with more patients than he can comfortably treat, a dentist must do one of three things; he may add to his hours of work; he may refuse to see some of the patients, or he may speed up his work. He may even do all three.

It is possible that some dentists are able and willing to increase their working time, and it is probable that most are now working longer hours than those recommended by Spens Committee. Whether this is adding either to their efficiency or to their enjoyment of life must remain open to question. Even so, most dentists are still on the horns of the dilemma that they must either refuse patients in need, who have an equal right with others to such treatment as is available, or they must hurry through the treatment of each in an effort to extend their services to all.

Hitherto it has been an unwritten law in our profession that a dentist should perform each operation to the best of his ability, having regard only to the patient's tolerance.

The fees for some of the items of treatment in the general service have been, and for the moment still are, well above those which obtained in the average practice before the passing of the Act; others are much below. I do not believe that anyone will disagree with me if I say that it is utterly unethical to be influenced by any such consideration in determining the course of treatment to be adopted for any patient.

Nevertheless, if the criteria for determining a line of treatment were to be reduced to a sordid consideration of what paid best, or if, conversely, patients were to be accepted for one part of their treatment under the Service and advised to contract privately for the rest, if the spirit of the regulations were to be observed when it was profitable and only the letter when observance of the spirit meant hard and less remunerative work; then we should no longer be talking of a profession, and the brotherhood of professional men would know us no more.

The question is not, therefore, whether we will condescend to work in this Service, but whether, as individuals and as a profession, we have the capacity for self-discipline, the ethical training and the philosophy to rise to those heights of altruism which the Service demands of us. Indeed, for many of us there is not even the possibility of choice; it is not a question of our being willing to dedicate ourselves; the Service is the only way and it is our only means of livelihood. The Service is here, and in some form or other will remain for as long as civilization lasts in this country. Whether it succeeds or fails must depend on us, for no one else can give to the people what they need. The success of the Service and the very future of dentistry depend upon our willingness and our capacity to sacrifice what may be legitimate personal gain for the salvation of our self-respect and the honour of our calling. If we wish the profession to which we belong to remain high in the public esteem and to be a source of personal pride to each one of us, we must be prepared to make this sacrifice of hard and unremitting toil and of restraint in estimating the value of our services.

It is no new experience for a dentist to find that he must work hard if he wishes to live well, or that he can live well if he is prepared to work hard. That has always been true. If he is prepared for the discipline of honest toil and does enter the Service then I am certain that there lies before him a unique opportunity, with the highly specialized training he now receives and the scientific resources at his disposal, of making an outstanding contribution to the health of the nation. Maladjustments, including that sad failure to concentrate on the treatment of the children, will be put right if we are all sufficiently determined to have a perfect service and to work hard enough and make the necessary sacrifices to attain one; but to strive to bring this about is first a dedication and only secondly a means of livelihood.

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The Interim Scale

Condensed from Editorial in the Br. D. Jour., June 3, 1949.

Two points are to be noted in connection with the latest revision of the scale of fees. The first is that, like the cut in gross incomes of over £4,800 per annum, imposed in February, it has been settled by the Minister without consultation with the profession, and the second, that it is not retrospective in its action as was S.I. 2803.

What is certain is that a satisfactory dental service for the public can only be established by enlisting the willing co-operation of the great majority of the members of the profession. That condition cannot be fulfilled unless the terms on which dentists are to be remunerated are settled in agreement with the profession and are not liable to sudden and drastic changes at the dictates of the Minister. The priority services, on which the ultimate success of the whole scheme depends, are in a semi-paralyzed state, and practitioners in the general service, harassed and overworked, have been left with a feeling of insecurity which cannot be otherwise than detrimental to the service as a whole. The figures of the earnings of some five thousand dentists, which have been published by the Ministry as part of the justification for the arbitrary revision of the scale, are well nigh meaningless in the absence of any information as to the number of chairside hours of work they represent.

The cut in the upper ranges of income effected under S.I. 2803 could be plausibly defended as a measure designed to discourage dentists from working for excessively long hours. The latest revision on the other hand is, in its very nature, a powerful incentive to do that very thing. It is difficult to form an opinion with regard to the more remote effects of the cut in remuneration. Any scale of fees based on averages always reacts to the disadvantage of the more careful and conscientious operators. They will, therefore, be at a still further disadvantage, and it need cause no surprise if a proportion of them revert to private practice, preferring the risks attendant on that step to that of having the basis of their remuneration changed by the arbitrary action of the Minister from time to time.

■

The Chancellor and the National Health Service

The austerity Budget which the Chancellor of the Exchequer presented to Parliament at the beginning of April brought cold comfort to all sections of the community, but it performed one salutary function in drawing the attention of his own party to the truth of the old adage about the impossibility of having your cake and eating it. From the medical angle the most significant part of his speech was the reference to the possibility of "imposing some special charge or tax in connection with the health services, both to help to finance them and to bring home to people generally the simple fact that they have to be paid out of taxation." This is a suggestion that has been noted before on more than one occasion, though never by a member of the political party at present in power. As a rule the suggestion has taken the form that if patients had to make a small token payment every time they consulted their doctors the number of unnecessary calls on the time of doctors could be materially reduced. The further psychological argument in favour of this suggestion is that people tend to value more highly what they have to pay for. The mere fact that the Chancellor even mentioned the possibility of such a special charge indicates the concern which the rising cost of the health services is causing to the Government.—From London Letter in Canad. Med. Assoc. Jour., June 1949.

South African Revists Britain

Dr. J. C. Middleton Shaw, Professor of Johannesburg, South Africa visited Britain for nine months last summer and has this to say about the new health service there as reported in Dental Magazine and Oral Topics. "I found great difficulty in finding out what the profession as a whole really thinks of the new health service. Many welcome it, but I believe that even those who are participating in the scheme have fears concerning their future. When the scale of fees was published there was a very marked increase in the number of practitioners who entered the service. This may have been a coincidence—but to me it appears to be of real significance. I understand that today the majority of the profession are participating in the scheme. A number who were not doing so seemed anxious concerning the survival of what they called 'free private practice.' On the other hand, during the course of a private discussion on the subject, I heard it stated that the outlook for 'free' practitioners was never brighter. But I must say that I found myself entirely unable to assess the position. It seems clear, however, that the State service has come to stay. I shall be surprised if, in the long run, it does not prove itself of value, not only to the public but to the profession. Dentistry's greatest need is for the value of dental treatment to become universally known. It must become known in a National Service. For economic reasons it is difficult to see how else it could become known in a country like Britain."

AUSTRALIA

Identification by Dentists' Records

Condensed from Editorial in Australia Jour. of D May, 1949.

A most interesting case of identification by the fillings in teeth has recently come under our notice.

It may be remembered that during March of this year a passenger plane crashed, resulting in the loss of ten lives, and the bodies of the victims were so mutilated by fire that positive identification by ordinary means was not possible.

In the case of Mr. J——, to which this article refers, it was known that he had been a patient and friend of Dr. J. W. E. Graham, of Melbourne, and the family dentist in New Zealand, Dr. Lee Jones, telephoned Dr. Graham from Wellington on March 20, and for some 30-40 minutes discussed the possibility of identification by the filled teeth of the unfortunate passenger.

It was suggested that possibly if two x-ray films in Dr. Graham's possession could be sent to New Zealand identification might be made certain. Since the matter was urgent, the Amalgamated Wireless Co. was consulted relative to the possibility of sending the x-ray by radio; this the company said presented no technical difficulty, and it was duly transmitted by what is known technically as "Facsimile Telegraphy."

According to Dr. Lee Jones the radioed pictures were excellent and these, together with the details supplied him from Dr. Graham's records, actually were sufficient to make the identification of the remains of Mr. J—— conclusive.

GENERAL NEWS

Aureomycin

Summary of paper by Donald R. Nichols, M.D., M.S. and Gerald M. Needham, Ph.D., in Proceedings of Staff Meetings of the Mayo Clinic, June 8, 1949.

An increasing number of infections are being caused by strains of Staphylococcus aureus (Micrococcus pyogenes var. aureus) which are resistant to penicillin but sensitive to aureomycin. Of fifty strains of Staphylococcus aureus recently isolated from various clinical materials, thirty-four were penicillin resistant. Of fifteen strains isolated from patients with bacteremia, twelve were penicillin resistant. Growth of all of the strains of staphylococci isolated was inhibited by aureomycin. Four of six patients suffering from penicillin-resistant staphylococcic bacteremia recovered when treated with aureomycin. Use of aureomycin as a routine in treatment of staphylococcic bacteremia is not advocated. However, aureomycin does appear to be the drug of choice when the organism is resistant to penicillin.

Compound E

Conclusions of paper in the Staff Meetings of the Mayo Clinic, May 25, 1949.

In each of 3 patients with acute rheumatic fever the intragluteal administration of the adrenal cortical hormone 17-hydroxy-11-dehydrocorticosterone (compound E) was followed by the rapid disappearance not only of the fever, tachycardia and polyarthritis but also of the elevated sedimentation rates and abnormal electrocardiographic changes.

In view of the markedly beneficial effect of compound E on the skeletal muscles and fibrous tissues of patients with rheumatoid arthritis, it may be hoped that compound E will exert a similar effect on the cardiac muscles and fibrous valves in rheumatic fever, an effect which salicylates cannot produce.

Nonetheless, it is as yet not possible to draw conclusions as to the effect of compound E on the rheumatic hearts of these 3 patients. Even though the effects of compound E observed in this study are encouraging, it must be emphasized that these patients will have to be observed for many months before it can be determined whether or not compound E has prevented or lessened the development of chronic organic injury to the heart valves or myocardium.

No supplies of compound E are expected for treatment or additional research until sometime in 1950 at the earliest, at which time supplies still will be exceedingly small.

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Poliomyelitis

1. Of 272 patients suffering from Anterior Poliomyelitis during an epidemic in Western Australia in 1948, 91 (33.45%) were found to have exposed dental pulps, whilst, of 548 controls inspected, 274 (50%) showed pulpal exposure.
2. Exposed dental pulps cannot be considered a significant factor in the aetiology of Anterior Poliomyelitis. — H. G. Radden, D.D.Sc. (Melb.), Australian J. of Dent., May 1949.

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Overspecialization

At the last meeting of the Greater New York Dental Convention two of the nation's leading dental educators warned of the dangers involved in overspecialization within the dental profession. Dr. J. Ben Robinson, Dean of the Baltimore College of Dental Surgery, said that a study of conditions of dental practice in almost any urban community would show that overspecialization had resulted in making the health interest of the patient secondary to the eagerness of the specialist to confine his practice within his own specialty. Dr. Walter H. Wright, Dean of the New York University College of Dentistry, commented adversely on the legislation in various states giving dental specialists special position. He said: "Specialists may regard such legislation as necessary and desirable since it legalizes the term 'specialist,' increases public esteem and justifies an increase in fees. However, such legislation is an abridgment of dental practice acts and borders on class legislation, because of the dental law which was designed to protect the rights of all dentists has been amended to give special rights and privileges to a few."—N.Y. State D. Jour.

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Norway

Under a system of national health insurance, doctors in Norway are paid out of the insurance fund, so many kroner for every consultation in the surgery, for every visit to a patient and for travelling expenses according to a scale of charges which varies with the mode of conveyance. Up to 1925, the insured patient paid the doctor nothing for these items. Since then he has had to pay a certain fraction of them himself, to ease the insurance fund directly and, by discouraging unnecessary consultations, indirectly. No one wishes to go back to the days when a doctor was often in doubt over what, if anything, to charge his poorer patients.

But what battles have been fought with the health authorities by the Norwegian Medical Association over scales of charges! With the enormous rise in the cost of living, it was obvious that there must be a parallel, if not equal, rise in the doctor's charges. After much discussion agreement was reached on April 1, 1948, when it seemed that every one was satisfied with the new scale designed to meet some at least of the rise in the cost of living. But the Government had afterthoughts over the concessions made to the Association, and it was recently announced that, as from January 13, 1949, a new scale would be imposed on the doctors as a Government order.

One of the most important differences between the two scales is that the latter fixes a hard and fast upper limit of charges, whereas the scale of April 1 was to be regarded merely as a guide to charges under ordinary conditions. Under extraordinary conditions these charges could be raised. The Association has declared the Government's proposed action to be illegal and has threatened to go to law over it.

The conflict now shifted to Parliament, the Storting debating it in February with a certain liveliness. During the debate, the country's legislators were given ample opportunity to say all the nice and other things they thought about their doctors. On behalf of them one speaker pointed out that a specialist with an international reputation could hardly be expected to keep his charges within the narrow limits of the Government's new scale. On the other hand, it was argued that the legal action threatened by the Association was a sign of arrogance on the part of a profession wishing to be in a class by itself, objecting to the restrictions imposed on all other members of the community. The word "dictatorship" was bandied about, and the debate ended in a unanimous recommendation to the Government to resume negotiations with the Association. This means that there will now be a searching investigation of the justice of the claims of the Association.

In a document recently issued, the Norwegian Labour Government has let it be known what it would like to plan for the future with regard to the health of the nation. It would like every patient to enjoy free medical treatment and to be free to choose his doctor. It would like the doctor to be paid in such a way that his income did not depend on the sickness of a given patient. In other words, it would prefer the English system of a fixed annual sum for every insured person instead of the present Norwegian system. It would also like to control the distribution of doctors so that sparsely populated areas do not suffer for lack of medical skill. The Government is also anxious to develop a system of remuneration which would stimulate doctors to keep the quality of their work up to a high standard.—Trouble Over National Health Insurance, J. of the American Medical Association 139:953 April 2, 1949—per Public Health Economics.

A New Era in the Prevention of Caries

In the March 1949 issue of the Journal of the Dental Association of Israel, published in Jerusalem the following appears in the editorial on Dental Caries by D. M. Glassman:—"Prof. Gottlieb also developed a preventive cure for the disease. He uses two solutions with a view to blocking the channels in the enamel. He applies a 40% zinc chloride solution to the dry tooth and then for the precipitation he adds a 20% potassium ferrocyanide. The holes are stopped by the metallic salt produced, and the tooth is no longer sensitive to cold and sweet.

"After many years of experimenting, on the part of Prof. Gottlieb and of many other dentists in America and Canada following his lead, in the impregnation of the teeth of many thousands of children and adults, results were arrived at which make it possible to reduce caries by 90%. Let us quote, in this connection, the words of the author himself: 'It may be said with certainty that a new era in dentisty has set in and we have the practical possibility to prevent caries.'

"We can fully endorse the statement of our learned master who has for nearly 40 years sat over his microscope, and has studied the teeth under varying conditions. There is no greater authority than he in the field of the histology of the teeth."

We trust that too great disappointment may not overtake these enthusiasts.—Editor.

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"Telling the Story of Dental Health"

The excessive consumption of the products of white flour and refined sugar is graphically indicted as the cause of dental disease in the new dental health film, "It's *Your* Health."

This indictment is direct. By reason of its outstanding story treatment and quality production, the film, which was originated by the Southern California State Dental Association, delivers, forcibly and accurately, its charge against refined carbohydrates in the diet. The process of dental decay and its cause, along with the consequences of dental disease, are all closely linked and identified with faulty diet. On the positive side, the film thoroughly deals with nutrition, as it pertains to dental health and general health, as well.

The manner of presentation is dramatic and

interesting. These qualities of the film make it unique in the field of dental health education.

In addition to its classroom use, the film is ideally suited for use before parent-teacher organizations, service clubs, youth groups and the like. In such a capacity the film provides supplementary material for dental health lectures. The price is $75.00:—Southern California State Dental Association.

Happiness does not depend on money, or leisure, or society, or even on health; it depends on our relation to those we love.—Robert Southey.

"Friendship improves happiness and abates misery, by the doubling of our joy, and the dividing of our grief."—Cicero.

IN MEMORIAM

Hugh Cameron Bayne of Sarnia, Ontario died on June 4 at the age of 52.

Dr. Bayne graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1921. After graduation he began to practise in Newbury but in 1922 he moved to Sarnia where he continued until his death.

He was President of the Lambton County Dental Society in 1935 and one of the organizers of the Sarnia School Clinic.

In 1918 he served overseas with the Canadian Dental Corps.

He was a member of the Presbyterian Church.

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George Nixon Briggs, Major, M.D., D.D.S., of Galt Ave., in Verdun, Quebec died on May 3, 1949 at the Queen Mary Veterans' Hospital in Montreal.

He is survived by his wife.

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Carl O. Flagstad, of Minneapolis, chairman of the A.D.A. Council on Legislation, died suddenly June 16 following a heart attack. His death came shortly after he had prepared testimony to be delivered June 20 before United States Congress in support of the Army Dental Bill sponsored by the A.D.A.

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Sidney James Hughes of Tara, Ontario died on June 23 at the age of 57 years.

Dr. Hughes was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1916. Immediately he began to practice in Owen Sound, moving to Tara in the following year and continued here until his death.

He was a fine public spirited citizen. He was a member of Tara School Board from 1923 to 1927 and again from 1933 to 1934. He was chairman in 1925. He was a member of the Municipal Council in 1928. He was active in the Rotary Club of Tara and was President in 1938-39. He was a member of the Masonic Order having served as Master of Maple Leaf Lodge in 1926. He was a member of the United Church.

He is survived by his widow, one daughter and one son.

•

Walter G. Price of Toronto, Ontario, died suddenly June 28. He was graduated from University of Pennsylvania in 1902.

He was a member of the Anglican Church and a Past Grand Principal of the Royal Arch Masons. Formerly he was a member of the Port Credit Bowling Club.

Dr. Price is survived by his widow, a son, and two sisters.

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William John Woods of Mimico, Ontario, aged 70, died June 20. He had practised in Toronto for 49 years.

He was on the Mimico public school board for 20 years and was also a member of the Mimico high school board for some time. He was an active member of the Catholic Laymen's Retreat Association and was also a member of the Third Order of St. Francis.

Dr. Woods is survived by 3 daughters, 2 sons and 3 brothers.

Le Journal
DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 AOUT, 1949 No 8

Nouvel aspect du traitement des gingivites de nature "saignantes" ou hyperplasiée, par l'électro-coagulation*

Par JULES THEBAUD, Montréal

L'électro-chirurgie trouva son application courante en périodontie, il y a quelques années, sous l'impulsion ingénieuse du Dr Webb.

L'idée d'employer ce procédé lui en était peut-être venue après que l'électro-chirurgie eut fait ses preuves dans l'ablation des diverses tumeurs de la bouche. Il s'agissait alors d'appareils avec électrode monopolaire.

L'emploi des électrodes bipolaires, pour éviter la dessication des tissus péridentaires, à distance, mis en relief le principal mérite de l'appareil de Webb. Fort malheureusement, l'appareil fût trop vanté par ceux là qui étaient les moins qualifiés, c'est-à-dire par les fabricants de ces appareils électriques, qui voulurent en faire une panacée, et les placer entre les mains d'un plus grand nombre possible de praticiens.

Nous connaissons le résultat d'une telle entreprise . . .

Les dentistes qui s'étaient pourvus de cet appareil dans l'unique but de "guérir" la pyorrhée alvéolaire ou d'éliminer "grosso modo" les clapiers pyorrhéiques, furent vite déçus. Il est logique de comprendre que la méthode d'électro-chirurgie bipolaire, telle qu'elle a été décrite alors, méritait une mise au point plus scientifique, et devait, être soumise à des multiples expériences, avant d'être considérée comme une technique infaillible.

Aujourd'hui, à quelques années de distance, il est permis de considérer les faits et les résultats cliniques à la lumière de l'expérience et des remarques de ceux-là qui sont les mieux qualifiés. Tandis que certains auteurs, tel que Meritt, condamnent, sans appel, l'application de la diathermie à haute fréquence en périodontie, mais toutefois sans preuve; d'autres, comme Orban, démontrent avec des preuves biologiques à l'appui, les résultats intéressants que l'on peut obtenir en réduisant et en éliminant les tissus pathologiques au moyen de cette méthode.

L'emploi de l'électro-coagulation, en périodontie, fut d'abord conseillé comme un remède souverain dans toutes les formes de pyorrhée alvéolaire (périodontite simple ou complexe). C'était là, l'objectif visé par les promoteurs de la méthode.

Comme il est décrit dans l'ouvrage de S. C. Miller, (page 213), la coagulation des tissus péridentaires correspondait à l'étendue des tissus gingivaux placés à

*(préparé à la Section des Recherches en Périodontie à la Faculté de Chirurgie Dentaire de l'Université de Montréal, sous les auspices du Comité National des Recherches.)

proximité des clapiers ou servant même de paroi externe à ces clapiers.

Gingivectomie & Coagulation

En somme, le traitement des clapiers pyorrhéiques au moyen de la coagulation semble s'apparenter à la gingivectomie, procédé par lequel, l'ablation des tissus pathologiques, qui entourent les clapiers, se fait à la suite d'une incision. Mais en faisant ici un simple rapprochement entre les deux méthodes, nous comprenons clairement que l'incision qui est nette, presque rectiligne, offre plus de commodité d'une part, et, moins d'aléas d'autre part, en ce qui a trait à la délimitation de la zone pathologique, qu'on risque de dépasser en coagulant trop profondément. Il y a aussi à considérer un autre risque qui est celui d'atteindre, même légèrement, le procès alvéolaire et, de trop dégarnir au point de vue esthétique, une gencive déjà en pleine récession quand les culs-de-sacs sont profonds.

Avantages de la coagulation dans le traitement de l'hyperplasie gingivale

Si toutes ces difficultés d'ordre technique font que l'électro-coagulation est presque délaissée dans le traitement des périodontites simple et complexe, nous pensons, par contre, qu'elle offre de grands avantages dans le traitement des gingivites de nature hypertrophiante où les lésions, qui sont superficielles, se trouvent localisées au bourrelet gingival ou dans les zones interpapillaires.

Ici une remarque s'impose; en parlant d'hypertrophie gingivale, nous devrions à proprement parler, dire hyperplasie gingivale ou gingivite hyperplasique en désignant le processus localisé principalement aux papilles interdentaires, sous la poussée des causes locales ou organiques, ou des deux à la fois.

L'ablation des tissus au moyen de l'incision et du cautère donne rarement de bons résultats dans les cas d'hyperplasie papillaire, parce que la récidive

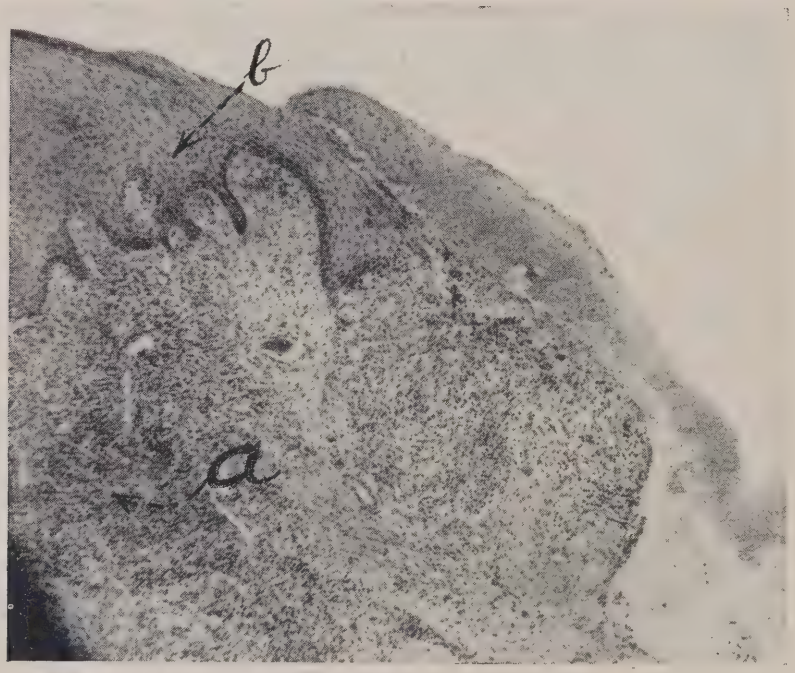


FIG. 1 (Thébaud)

Portion de papille hyperplasiée montrant (a) l'envahissement du tissu conjonctif par des cellules rondes du plasma et la couche épithéliale (b) de la muqueuse gingivale.

par rebourgeonnement des tissus interdentaires est extrêmement fréquente à la suite de l'ablation par incision. A peu près dans 60% des cas, la repousse des tissus hyperplasiés est de règle.

Personnellement, pour avoir obtenu de bons résultats dans le traitement des gingivites de nature hyperplasique, nous pensons que le succès obtenu est dû à la présence d'un tissu cicatriciel qui remplace les bourrelets et les papilles congestionnées ou hyperplasiées. Nous nous sommes basés sur les preuves biologiques fournies par Orban pour considérer l'organisation de ce tissu cicatriciel comme une certitude scientifique.

Preuves Biologiques

Dans le but de suivre les différentes étapes par lesquelles passe le processus de guérison de la gencive après la coagulation, Orban, pour des fins de biopsie, préleva, tous les deux jours, une petite portion des tissus en voie de régénération.

Pour expliquer son expérience, je ne trouve pas de meilleurs moyens que d'exposer ici ces micro-photographies (figure 2) avec la note explicative suivante:

Cinq étapes consécutives photographiées à deux jours d'intervalle au cours de la guérison des tissus gingivaux, comme suite à la coagulation:

A) (a) aspect de la gencive immédiatement après la coagulation
   (b) limite de la partie coagulée
   (c) portion Kératinisée de l'épithélium
   (d) papilles épithéliales

B) 24 heures après
   (a) la zone superficielle est légèrement surélevée, à cause de l'accumulation sous-jacente des leucocytes
   (b) ces mêmes leucocytes, entourent des débris
   (c) de tissus, nécrosés, et dans lesquels
   (d) il y a prolifération de bacteries.

C) Au troisième jour, la couche super-

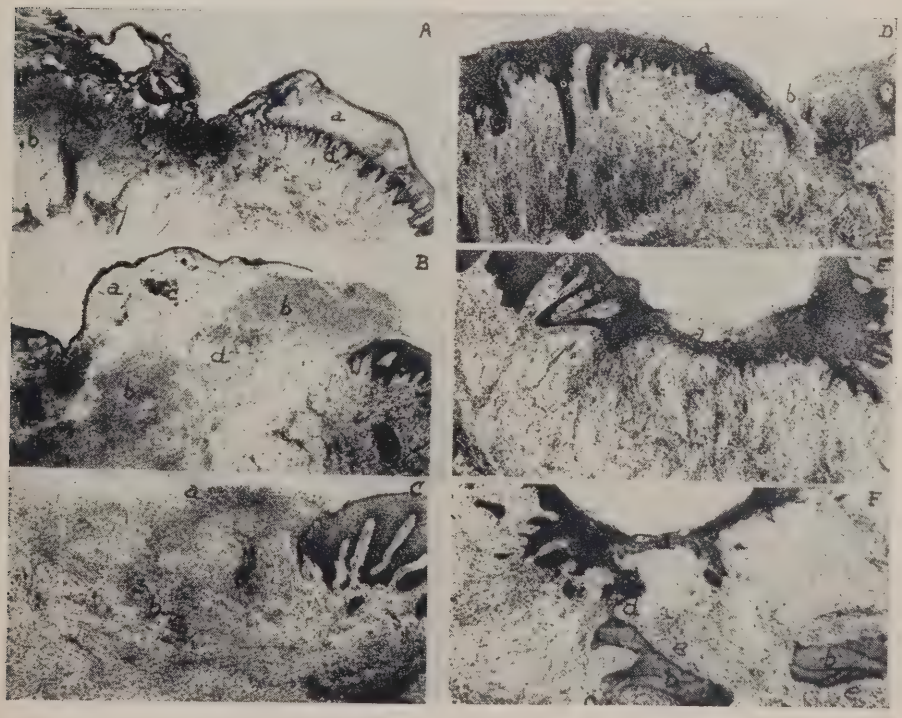


FIG. 2—(Orban) Tissus coagulés et processus de guérison.

ficielle des tissus nécrosés se détache, exposant ainsi le tissus conjonctif sous-jacent à travers lequel les leucocytes émigrent vers la couche épithéliale (a) bien qu'au point (b) il existe encore des parcelles de tissus nécrosés.

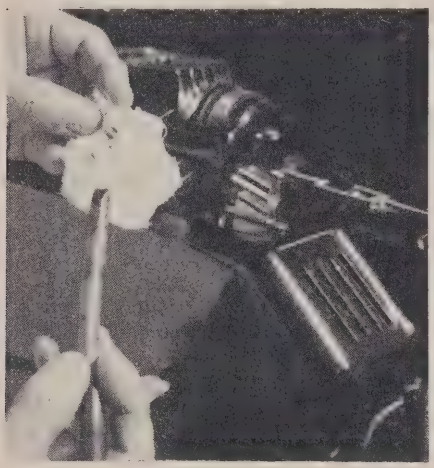
D) Au huitième jour, l'épithélium (a) s'organise en vue de se souder à l'ancien épithélium au point (b), cependant que l'infiltration cellulaire continue en-dessous.

E) Dix jours après, le nouvel épithélium recouvre entièrement la partie coagulée.

F) Cette figure montre des séquestres extrêmement petits en voie d'expulsion, illustrant, dans le cas d'une coagulation profonde, les dégâts que peut subir l'os alvéolaire.

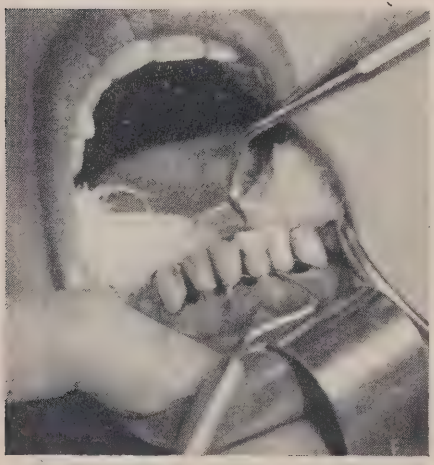
Cautère & Coagulation

Quant au procédé du cautère, il comporte tant de risque à cause de la dessiccation et de la brûlure, même à distance des tissus, qu'il est contre-indiqué. Tandis que la coagulation qui fige, précipite et détruit d'une façon limitée, les tissus placés en contact avec les électrodes, non seulement ne cause aucun dégât, à distance, mais elle permet la régénération rapide des



3a

3b



3c

3d

cellules placées à son extrême limite du champ d'action et favorise, dans la suite, l'élaboration graduelle d'un *tissu cicatriciel,* qui est d'une importance considérable lorsque nous cherchons à remplacer les masses gingivales hyperplasiées, congestionnées, et flasques par une gencive ferme et résistante.

Détails à observer

Ayant analysé et apprécié les principes qui mettent en relief le mérite de l'électrocoagulation, nous nous proposons de faire ressortir ici tous les avantages que l'on peut tirer au maximum de ce procédé, quand il est employé dans le TRAITEMENT DES GENCIVES HYPERPLASIEES.

Ces avantages s'obtiennent principalement en observant les détails suivants qui découlent de nos expériences personnelles:

1) Après avoir ajusté l'appareil à un faible courant (3a), pratiquer la coagulation des papilles, buccalement et lingualement (3b), et faire l'ablation totale des tissus coagulés au moyen d'une curette, surtout dans les espaces interdentaires ou les résidus ont tendance à adhérer (3c).

2)—Enlever les tissus "blanchis" ou coagulés jusqu'à l'extrême limite, *en ayant soin de provoquer,* au moyen de la curette, une légère saignée de la partie saine de façon à favoriser l'organisation du caillot sanguin. (3c).

3)—Arrêter l'hémorrhagie au moyen d'un hémostatique léger, comme le Thromboplastin.

4)—Assécher chaque espace interdentaire par des tamponnements à la gaze ou au coton.

5)—Protéger les tissus fraîchement exposés qui doivent s'organiser en tissus cicatriciels, en appliquant séparément, dans chaque espace interdentaire, un ciment spécial ou "pack" à base d'oxyde de zinc et d'eugénol.

6)—Eviter de trop surcharger les surfaces des dents avec ce ciment en ayant soin de recouvrir seulement les parties curetées au moyen de petits cônes insérés dans les espaces interdentaires. (3d)

7)—Renouveler les ciments ou "packs", après les 5 premiers jours, pour une nouvelle période d'une semaine.

Précautions à prendre

Beaucoup de cliniciens pratiquent la coagulation à froid, sans anesthésie; nous pensons que cette pratique n'est nullement recommandable pour le succès d'une telle intervention, à laquelle se trouve mêlée la chirurgie, puisqu'il est question de mettre au vif et de provoquer le saignement des tissus exposés après l'ablation des masses coagulées. L'expérience nous apprend que l'anesthésie superficielle à la nupercaine, par exemple, est même insuffisante. Pour le succès de l'opération, l'anesthésie locale ou régionale est de rigueur.

Il importe de coaguler un peu plus côté lingual que du côté externe, même si les parties "boursouflées" sont plus étendues du côté externe. De même, il est recommandable dans certains cas rebelles de *renouveler et de maintenir le ciment en place pendant une période de trois semaines,* de façon à discipliner les papilles réformées et d'empêcher une repousse trop rapide des néo-tissus, de densité flasque. La tendance au rebourgeonnement des tissus, de nature lâche, semble précisément se faire dans les espaces interdentaires en débutant du côté lingual (?).

Cette récidive ou "rebourgeonnement" des tissus s'observent dans les cas rebelles, anciens ou nouveaux, dans lesquels l'anémie, même faible, les troubles de la puberté, l'avitaminose C ou B, les désordres endocriniens ou tous autres facteurs étiologigues jouent un rôle important.

Ces "rebourgeonnements" ne sont pas imputables, comme on le comprend bien, uniquement à la coagulation même, mais plutôt à la nature des terrains et, c'est pourquoi, nous ne devons pas hésiter à faire des retouches c'est-à-dire à coaguler, même isolément toutes les papilles "rebourgeonnées."

Les figures 4 et 5 donnent une idée d'un cas rebelle pour lequel le détartage, la correction du déséquilibre masticatoire et une première coagulation n'ont donné aucun résultat appréciable; pour un pareil cas, il a fallu coaguler une deux-

ième fois, après un intervalle de quatre mois.

Pour éviter toute équivoque, disons que tous les cas d'hyperplasie gingivale ou de gingivite de nature "boursouflée" et saignante ne sont pas justifiables de l'électro-coagulation: les gencives flasques à bourrelets hyperplasiées chez les diabétiques et chez ceux qui sont atteints de leucémie, d'anémie pernicieuse ou ne redeviennent pas normales, la coagulation est le procédé de choix.

Les cas d'hyperplasie gingivale qui répondent le mieux à ce traitement sont précisément ceux qui paraissent être de prime abord très avancés, à cause du développement prononcé des papilles, mais dans lesquels aucun facteur organique n'agit sur le terrain pathologique, c'est-à-dire que le rapport du médecin

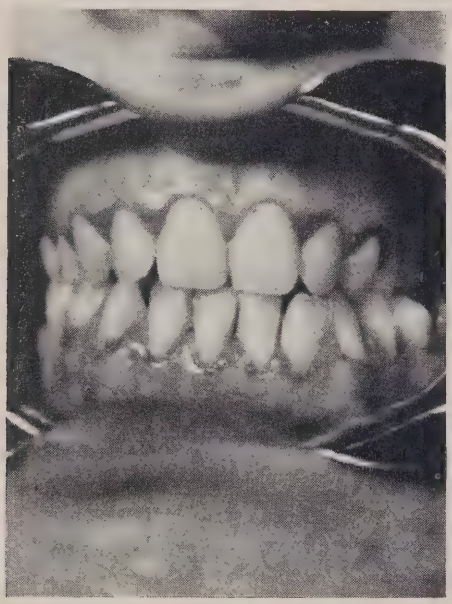


FIG. 4—cas 1, avant le traitement à l'électro-coagulation.

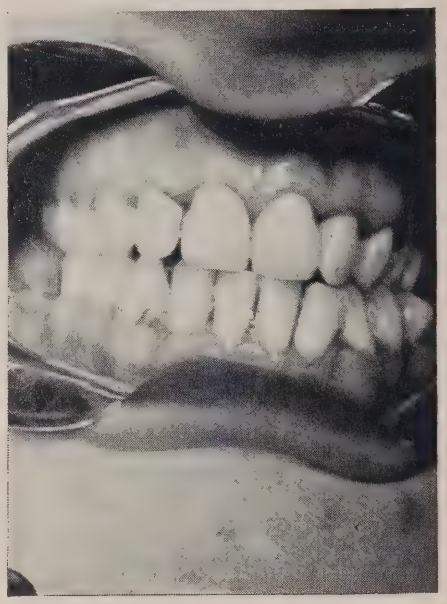


FIG. 5—cas 1, après le traitement.

d'autres troubles vasculaires très accentués ne peuvent être coagulées à l'électricité qu'en cas d'une grande amélioration dans l'état général des patients, et après avoir désinfecté ou réduit les faux-clapiers au moyen de "packs."

Comme il est important que toute intervention sanglante soit écartée dans ces cas, l'ablation des tissus coagulés devra se faire avec beaucoup de précaution, de façon à éviter le saignement que nous provoquons intentionnellement dans les cas ordinaires.

Même pour les gingivites, dites expulsives, que l'on observe chez les femmes enceintes, il est prudent d'attendre la délivrance; à ce moment si les papilles est favorable dans ces cas en ce qui a trait à l'hémogramme, à la chimie sanguine, et à l'examen général du patient.

Ce sont ces formes d'hyperplasie qui constituent la majorité des gingivites à causes locales que nous observons dans la pratique courante et qui, très souvent, ressemblent à la pyorrhée alvéolaire et pour lesquels la radiographie démontre bien l'intégrité de l'os alvéolaire et de la membrane péridentaire (fig. 7).

La figure 6 représente à peu près le prototype de ces cas, qui, quand ils sont coagulés à temps, et soumis ensuite à une hygiène rigoureuse et au massage régulier, donnent des résultats assez encourageants.

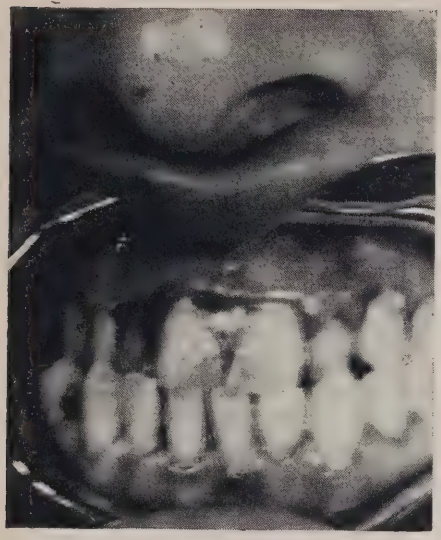


FIG. 6—cas 2, avant le traitement.

FIG. 8—Cas 2, après le traitement.

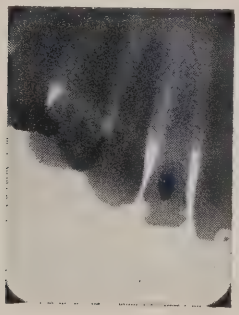


FIG. 7—radiographie de la partie la plus hyperplasiée, (région canine gauche).

Conclusions

L'électro-coagulation, qui a été employée tout au début avec l'idée d'éliminer radicalement les clapiers pyorrhéiques, n'a certainement pas donné les résultats espérés, mais l'expérience nous démontre, tous les jours, qu'elle est une arme puissante dans le traitement des gencives hyperplasiées. Les résultats obtenus au moyen de la gingivectomie ou de n'importe quel autre traitement ne sont pas aussi satisfaisants, sauf, si l'on ne se donne pas la peine d'enlever minutieusement toutes les parcelles de tissus coagulés et qu'on laisse les couches conjonctives sous-jacentes se sphaceller, s'infecter et repousser sans être protégées et disciplinées.

Ce nouvel aspect du traitement des gingivites hyperplasiées ou hypertrophiées au moyen de l'électro-coagulation mérite d'être considéré par tous ceux-là qui s'intéressent à la périodontie clinique.

BIBLIOGRAPHIE

B. Orban—Tissue healing following electrocoagulation.

S. C. Miller—Text book of Periodontia.

J. Thébaud — Journal de l'Association Dentaire Canadienne—novembre 1947.

Congrès des Provinces Maritimes, les 31 août, 1er et 2 septembre

Ce premier congrès des provinces maritimes (Nouveau Brunswick, Nouvelle-Ecosse, Ile-du-Prince Edouard) aura lieu à l'Hôtel Algonquin, à St. Andrew-by-the-Sea.

Parmi les cliniciens invités à cette occasion, seront présents:

les docteurs *Stephen Mallet,* chef du Service de Chirurgie Buccale du Boston City Hospital;

Irving R. Hardy, chef du Service de Prothèse du Tufts College;

George Hall et *A. L. Keltie,* de Boston, qui traiteront de: "La technique Davis pour les obturations en silicate".

D. P. Mowry, doyen de la faculté dentaire de l'Université McGill;

Roy Ellis, doyen de la faculté dentaire de l'Université de Toronto.

Des cliniques de table seront offertes par les docteurs J. P. Coupland, Ottawa, (Interprétation des radiographies), Reginald Wynn, Montréal, (Orthodontie), Robert Ogilvie, Fredericton, (Aurifications), R. E. Lussier, Montréal (Tours de Mains), J. W. MacLeod, Truro (Coloration des dents en acrylique), L. I. Duffy, Charlottetown (Digue de caoutchouc), John Merritt, Halifax (Coiffe de Porcelaine).

Les attractions sociales au programme sont les suivantes: golf, natation, tennis, danse, cartes, cinéma, pêche en haute mer, excursions, etc.

Jeudi, le 1er sept., il y aura un cocktail, suivi d'un diner et d'une danse.

Pour tous les renseignements, on s'adresse au:

Dr Howard MacDonald
161, rue Charlotte Saint-Jean, N.B.

Représentants des Sociétés Dentaires de Joliette et de St-Hyacinthe aux Trois-Rivières.

Photographie prise à l'occasion de la visite du Président et du Secrétaire de l'Association Dentaire Canadienne, aux Trois-Rivières, en avril 1949. Dans le groupe, nous remarquons: les docteurs L. L. Benny, président de la Société Dentaire de Joliette, Paul Dionne et L. Desrosiers, de Joliette; Laurent Deslauriers, président de la Société Dentaire de St-Hyacinthe, M. Bédard, L. Gaboury, R. David, de St-Hyacinthe.

PAGES EDITORIALES

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Invitation aux dentistes de Terre-Neuve

par G. V. Fisk, président de l'Association Dentaire Canadienne

Comme président de l'Association Dentaire Canadienne, j'ai l'insigne privilège de souhaiter la bienvenue aux dentistes de Terre-neuve, au sein de notre vie professionnelle canadienne, et de les inviter cordialement à devenir membres participants aux activités de l'A.D.C. Les membres de la profession dentaire des neuf autres provinces peuvent apprendre beaucoup des confrères de notre nouvelle province, puisque des organisations dentaires ont existé en Terre-Neuve, bien avant que la dentisterie soit organisée en tant que profession au Canada. D'un autre coté, à cause de son envergure, l'Association Dentaire Canadienne a beaucoup à offrir aux confrères de notre nouvelle province insulaire.

Quelques dentistes de Terre-Neuve sont déjà membres associés de l'A.D.C. et se tiennent au courant de l'étendue de nos activités par le medium de notre publication officielle. Pour que tous les dentistes de cette province soient renseignés sur le travail admirable de notre organisation nationale et, dans un geste de bonne entente, le Bureau des Gouverneurs de l'A.D.C., à sa réunion annuelle de Saskatoon, a demandé au gérant d'affaires d'expédier à chaque dentiste de Terre-Neuve le Journal de l'A.D.C., depuis la livraison d'août jusqu'à la fin de l'année.

Ce geste du Bureau des Gouverneurs va certainement susciter des désirs de plus étroite collaboration avec notre organisation nationale. Il est peut-être opportun d'indiquer brièvement, pour renseigner nos confrères de Terre-Neuve, la procédure à suivre pour obtenir une affiliation active à l'A.D.C. Une application, accompagnée d'une liste des membres, est remplie par l'organisme provincial officiel. Les statuts et les règlements

de notre Association prévoient l'approbation d'une telle demande à une assemblée des membres dûment convoquée.

Une invitation a été faite au Collège Dentaire de Terre-Neuve au nom des officiers et du Bureau des Gouverneurs à remplir une application officielle pour devenir membre incorporé de l'A.D.C. L'acceptation de cette invitation par le Collège Dentaire de Terre-Neuvre serait un moyen excellent d'unifier et de fortifier la profession dentaire au Canada.

Puissent les confrères de Terre-Neuve être assurés que cette invitation est secondée par tous les membres du Bureau des Gouverneurs et qu'elle réflète, j'en suis certain, les sentiments de tous les membres de la profession dentaire des autres provinces.

Discours du Président de l'A.D.C.

Saskatoon, juin 1949

par HOWARD J. MERKELEY, M.D.S.

Nous venons de franchir une autre étape de l'existence de l'Association Dentaire Canadienne. Notre histoire, en tant qu'association, commence en 1902; depuis ce temps, il y eut une ou deux réorganisations; nos objectifs n'ont pas varié; seule notre constitution interne a changé. Aujourd'hui, nous avons une administration qui fonctionne bien, grâce à un personnel permanent d'une grande qualité, aidé en quelque sorte par les comités exécutifs et les Bureaux des Gouverneurs, qui se succèdent.

Il nous sera profitable à tous de faire le point et d'examiner les programmes et les projets d'avenir de notre association, de façon à se préparer à jouer notre rôle dans ce monde qui varie sans cesse, en face des responsabilités et des complexités des problèmes de santé.

Les temps sont changés de depuis que notre art se limitait plus ou moins à l'élimination indolore d'une molaire; et dans le domaine de la restauration, dans le remplacement de cette dent par une autre, ficelée aux voisines.

Notre progrès s'est fait, en empiétant sur d'autres domaines, entre autres pathologie, bactériologie, histologie, anatomie, chirurgie, anesthésie et plusieurs autres. Nous en sommes au point où la recherche et la dentisterie préventive sont nos préoccupations de l'heure.

Notre champ d'activités ne s'est pas surspécialisé, quoique nous nous enorgueillissions de découvertes faîtes dans des sphères spécialisées comme les travaux de Morton et de Wells, en anesthésie.

Scrutons, si vous le voulez bien, la dentisterie moderne telle qu'elle se présente à nos yeux aujourd'hui et considérons notre programme en face des buts que nous nous proposons pour l'avenir. Pour ce faire, il est bon de savoir comment se prépare un programme, au sein de notre Association.

Un grand nombre de comités sont élus ou appointés dans le but d'étudier un point particulier de l'exercice de notre profession. Ce comité étudie à fond la question et prépare un rapport qui est soumis au Comité Exécutif ou au Bureau des Gouverneurs. Ce rapport est ensuite référé à un autre comité, qui l'analyse, le discute, pour ensuite rédiger un autre rapport qui est soumis à son tour au Bureau des Gouverneurs. Ces deux rapports son discutés; des décisions sont prises et une politique est établie sur cette question; politique qui permet à la profession d'évoluer, sans erreur, vers son idéal.

Chaque année apporte ses nouveaux problèmes et, permettez-moi de rendre hommage à ceux qui ont édifié les bases

de notre Association aux tout premiers jours. Ceux-là ont bien servi, en donnant sans compter leur temps et leur argent pour guider ses premiers pas; payant de leur poche leurs déplacements et se tenant prêts à répondre aux exigences de l'heure, sans ménager leur temps. Honorons aussi le personnel permanent, nos gouverneurs et les membres des comités qui consacrent plusieurs semaines à l'accomplissement de leur besogne.

Nous espérons abriter bientôt nos quartiers-généraux dans un local digne de notre Association et qui nous permettra d'étendre nos activités. Nous avons besoin d'un assistant pour notre secrétaire, de préférence bilingue, pour le soulager d'une partie de la routine de bureau et lui permettre de consacrer plus de son temps précieux au bien de notre Association. Je crois que le temps est mûr où nos contacts avec les organismes et les associations, s'occupant de la santé en général, doivent se développer par notre secrétariat. Les années passent et les problèmes deviennent plus nouveaux et plus difficiles. Je crois que c'est un bon signe qui indique une poussée vigoureuse et une bonne volonté à accepter de nouvelles responsabilités.

Ceux qui sont chargés de notre Journal ont une besogne, qui ne finit jamais. De mois en mois, le coût des impressions monte sans cesse et des questions épineuses touchant au domaine de la publication, se présentent constamment; leur tâche est de plus en plus lourde et leur responsabilité plus écrasante. Nous sommes fiers de la place occupée par notre Journal dans la production littéraire dentaire du monde et nous devons un témoignage de gratitude au personnel chargé de la rédaction, guidé par nos chers co-rédacteurs, Harry Garvin et Gérard de Montigny; en face de cette situation, il faudra trouver, dans un avenir rapproché, un moyen de distribuer équitablement ce travail et d'améliorer considérablement les gratifications pécuniaires. Voici une des raisons pour les dentistes canadiens de contribuer plus largement au soutien financier de l'A.D.C.

Toutes nos relations professionnelles avec les services de santé fédéraux et provinciaux ont été des plus cordiales et souvent ces services ont demandé des renseignements et des directives à notre secrétaire sur des problèmes de santé. Plusieurs comités et délégations ont eu des entrevues avec les dirigeants des services fédéraux et toujours ces contacts ont donné des résultats appréciables. Nous espérons que ces relations cordiales continueront d'exister pour le plus grand bien du public et de notre profession.

Trois problèmes d'envergure occupent présentement notre attention. D'abord, permettez-moi de parler de ce qu'on appelle communément la socialisation de la dentisterie. En face des projets gouvernementaux de cette nature, l'A.D.C. a toujours proné le traitement des enfants d'abord, plus tard celui des adultes, l'importance de l'éducation d'hygiène dentaire et de la prévention. Je suis donc d'avis que nous devrions continuer et développer nos cours de pédodontie à travers le Canada. Tel est notre principal devoir, si nous voulons garder notre place comme organisation s'occupant de la santé.

Certains techniciens ont outrepassé leur domaine à plusieurs endroits et je suggérerais aux collèges provinciaux de corriger ces situations, en adoptant peut-être la méthode des prescriptions.

Depuis quelque temps, des revues publient des articles traitant de dentisterie; quelques-uns de ces articles étaient erronés; d'autres, traitant de recherches, étaient trop enthousiastes. Cette question a été référée au Comité des Relations Publiques et chaque cas particulier a été réglé à la satisfaction du Bureau des Gouverneurs; une politique a été établie pour s'occuper des cas semblables, qui pourraient se présenter dans l'avenir.

Comme exemple d'article excellent pour le public, permettez-moi de vous souligner celui de notre secrétaire, qui a traité de la vocation de dentiste dans le Financial Post; cet article a soulevé des commentaires des plus élongieux et en est un, dont peut s'enorgueillir la profession dentaire canadienne. Un autre petit volume traitant de vocation dentaire

aussi a été préparé par l'Association des Anciens de l'Université de Toronto, en collaboration avec le Comité des Relations Publiques. Ce volume sera publié prochainement dans les deux langues.

Notre Comité d'Education Dentaire, depuis quelques années, s'est évertué à standardiser l'enseignement dentaire au Canada et à reviser les curricula. De plus, il a fait un magnifique travail pour doter l'Association d'un Bureau National d'Examens.

Nous avons raison d'être fiers de nos facultés dentaires qui, depuis un an ou deux, ont opéré plusieurs changements dans leur personnel et même parmi leurs doyens. Cette année a marqué l'ouverture d'un nouvel édifice à Edmonton; édifice des mieux conçus et aménagés, qui sera le siège de la Faculté de chirurgie dentaire de l'Université d'Alberta. Nous sommes heureux de constater ici que des étudiants pourront être formés admirablement dans un atmosphère propice par une Faculté composée relativement de jeunes professeurs, pleins d'enthousiasme et de visions d'avenir. Des facilités pour la recherche ont été mises sur pied et, là encore, nous entretenons des espoirs pour les années à venir. Le docteur Hamilton a droit à un hommage tout particulier pour ses efforts inlassables à l'édification de cette école.

Durant l'année, il nous a été accordé le privilège de visiter l'Ecole Dentaire de l'Université de Montréal. A cet endroit, j'y ai recontré notre ami à tous, le docteur Charron, qui a bien voulu se faire mon cicérone. Cet édifice est des mieux conçus et outillés et, année par année, dote notre profession de jeunes confrères, dont nous sommes orgueilleux et qui portent la marque professionnelle que leur laisse le docteur Charron. Espérons que chacun d'eux garde, de leur doyen, des signes de sa compréhension, de ses manières charmantes et de sa bienveillance.

Le problème des personnes déplacées, qui ont reçu une formation dentaire, nous occupe considérablement. Le barême des diplômes européens est difficile à établir et la plupart de ces personnes ont perdu ou n'ont pas de copies de ces diplômes. Il n'est pas facile de faire comprendre aux agents du gouvernement la nécessité de faire un choix parmi toutes ces applications. Il serait à souhaiter que les Facultés dentaire évaluent la compétence de ces D.P., quand ils veulent pratiquer au pays et de cette façon, standardiser les exigences.

Depuis notre dernière réunion, notre Secrétaire a passé quelques semaines en Angleterre, à l'étude de l'organisation du plan d'assurance-santé, établi dans ce pays. Nous avons maintenant son rapport et des fiches volumineuses, qui ont été étudiés par le Bureau des Gouverneurs et qui nous aideront à faire des suggestions au Gouvernement canadien, si celui-ci s'embarquait dans une aventure semblable.

Notre profession n'est pas opposée à un plan qui propagerait les traitements dentaires, mais qui, en même temps, donnerait toute l'importance voulue à la qualité des traitements, à la recherche, à l'education et à la prévention.

Quand mon bon ami, Philippe Hamel, m'a intronisé comme président, l'an passé, je me demandais quelles seraient mes plus grandes joies au cours de mon terme de président; à cette heure, j'avouerai que ce fut de renouer de fidèles amitiés d'un océan à l'autre et de connaître des confrères et leurs charmantes épouses et de me dire: "Voilà mon pays et voici mes compatriotes et mes confrères". Je m'apprête maintenant à laisser le plus haut poste que confère notre Association; permettez-moi de vous dire combien j'ai apprécié ce privilège d'être associé à l'Exécutif et au Bureau des Gouverneurs, constitué d'un groupe d'hommes admirables. Cette fonction m'a rendu fier d'être un dentiste canadien.

A mon successeur, mes meilleurs souhaits pour qu'il apprécie son terme d'office autant que j'ai apprécié le mien. Je suis assuré qu'il recevra la même collaboration de notre profession et de ses officiers.

Mes meilleurs voeux de succès . . .

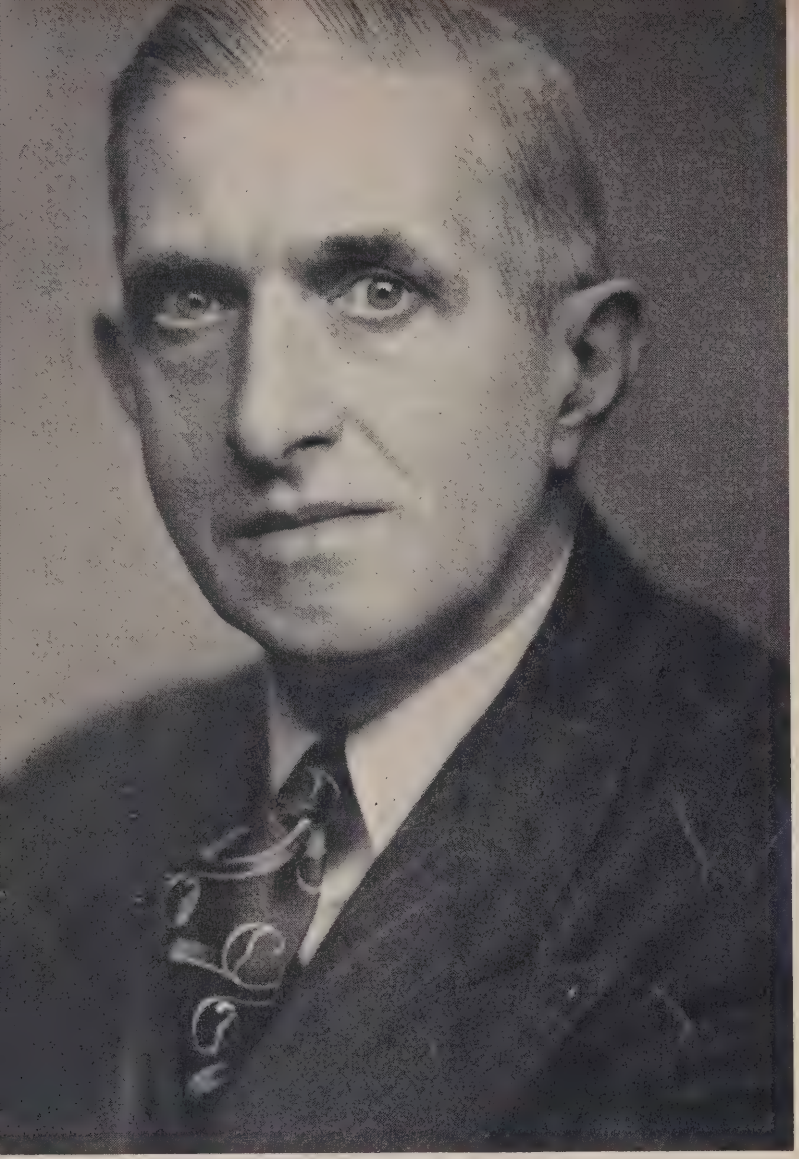
Photo copyright Clifford R. Kopas

Mount Stupendous

Mount Stupendous, Bella Coola Valley, British Columbia . . . Thirty miles up the beautiful Bella Coola Valley, Mount Stupendous is locally called table mountain because of the white tilted table cloth forever at its crest. Alexander Mackenzie, the first white man to cross the continent, dropped into the Bella Coola Valley, in 1793 and spoke very fervently of the beauties of this mountain.

PRAYER OF MAIMONIDES

"The eternal Providence has appointed me to watch over the health and life of Thy creatures. May the love of my work actuate me at all times, may neither avarice nor miserliness, nor the thirst for glory of a great reputation engage my mind—Endow me with strength of heart and mind so that both may be always ready to serve the rich and the poor, the good and the wicked, friend and enemy, and may I never see in the patient anything else but a fellow creature of pain. If physicians more learned than I wish to counsel me, inspire me, O God, with confidence in, and obedience toward the recognition of them for the study of science is great, it is not given to one alone to see all that others see. Grant me strength and opportunity always to correct what I have acquired, always to extend its domain, for knowledge is boundless and the spirit of man can also extend indefinitely. O God, Thou hast appointed me to watch over the life and death of Thy creatures. Here I am—ready for my vocation."



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HABITS THE SABOTEURS OF OCCLUSION

by Dr. W. K. SHULTIS, Toronto, Ontario

IN THIS modern age of dentistry dentists should be prepared to do more than fill and extract teeth and construct dentures. It is the dentists' responsibility to recognize, diagnose, prevent and even forecast conditions that are far removed from these basic mechanical skills of dentistry. How frequently are we asked such questions as "Are my little girl's teeth going to be crooked?" or "Why do John's teeth stick out while his sister's do not?" or again "Does thumb sucking really make the teeth crooked?" Parents desire and rightly deserve an answer to their queries, a professional opinion based on keen observation, sound judgment and a scientific knowledge of the normal as applied to occlusion and growth and development of the child's dentition at various ages. All too often the valued professional opinion may amount to an evasive, unfounded, "stock" answer such as "The teeth will probably straighten themselves out in time" or "She has inherited large teeth and small jaws." The family dentist is in a position to see the child patient periodically and should accept the responsibility of recognizing trends toward a malocclusion and either treat the condition or refer the patient elsewhere for diagnosis and possible treatment.

Many types of malocclusion or so-called "Crooked Teeth" cannot be prevented as they stem from an inherited complex that may have an unbalancing effect on the physical, physiological, metabolic, neurotic or psychic character of the child. Other types can be traced to neglect in the care of the primary and secondary dentitions. The aetiological factors in which we are here interested are those including habits and their resulting muscular unbalance. Many malocclusions of such origin, if recognized early, may be prevented and even corrected without resorting to mechanical therapy.

We are familiar with the way the Chinese developed small feet by binding their feet to inhibit growth. Some African natives change the shape of their heads by similar binding methods—others lengthen their ear lobes and enlarge their lips by the use of weights and other abnormal forces. When teeth erupt they are subjected to an outward pressure produced by the tongue. At the same time the muscles of the lips and cheeks tend to provide a holding or inward pressure. The resulting muscle balance decides the alignment of the teeth. Any habit, force or series of forces which is sufficiently strong and applied frequently enough to disturb this normal balance of forces will therefore most assuredly affect the arrangement of the teeth. Habits are oft-repeated actions. Dentists are apt to consider all habits as harmful. This is not the case as many are harmless and others very useful. Let us consider a number of muscle balance-disturbing habits from the

standpoint of the way in which they are practised, their recognition, effect and correction.

The Tongue

The tongue is an all-important organ consisting of muscles which through their actions can flatten, curl, elongate, shorten, protrude, retrude, raise, lower and move the tongue side to side etc. During the act of swallowing the tongue normally provides a stimulating and supporting force on the dental arches. The tip of the tongue usually rests on the rugae at the anterior part of the palate while the food passes down the curved centre of the tongue into the throat. However, during swallowing, the tip of the tongue may for an instant take up a false position against the lingual of the upper anterior teeth and thereby exert an abnormal outward force. This being repeated with every swallow adds up to an intermittent force which over a period of time is sufficient to cause the protrusion of the upper anterior teeth. This forward thrusting of the tongue is accompanied by a lack of lateral stimulating and supporting force on the dental arches. This may partly explain why the upper arch particularly is often narrowed. A crease in the tongue may often be noted and this is a symptom of its deficiency of support to the dental arches.

Now, what causes this habit? Enlarged tonsils will often reduce the size of the opening into the oral pharynx sufficiently to interfere with swallowing. In such cases the individual usually thrusts the tongue farther forward to increase the opening and facilitate swallowing. This habit occasionally persists after the tonsils are removed. In children where the tonsils have been removed at an early age, we rarely find the swallowing habit while the deciduous anterior teeth are present. This would indicate that the habit is initiated during the transitional period. In the writer's opinion the child, after losing one or more deciduous anterior teeth, attempts to compensate for attending speech and swallowing difficulties by poking the tongue into the opening. This develops into a habit which may persist after the eruption of the secondary upper anteriors. In some of these cases we find the tongue placed against the upper anterior teeth even at the rest position. This abnormal pressure causes the protrusion of the maxillary anteriors.

Tongue sucking is a perversion of the sucking instinct. The tongue is constantly pushed back and forward between the upper and lower anterior teeth when the jaws are in their rest position. The effect is a force which produces a protrusion and an open bite. Almost invariably the tongue, when not sucking, takes up its rest position with the tip sticking out between the teeth. This differs from the swallowing habit in its tendency to cause a more open bite. The causes of tongue sucking are similar to those of other sucking habits and will be covered further on.

Tongue biting is evidenced by tooth imprints on the under side of the tip of the tongue. It is closely allied with tongue sucking but differs in that its effect usually produces a greater open bite and less protrusion. This habit is frequently associated with an oversize tongue. Its effect is one of hindering normal vertical growth and the eruption of the anterior teeth and is often emphasized by what appears to be an increased vertical growth in the regions of the posterior teeth.

There are other less common tongue habits such as placing the tongue between the teeth and upper or lower lips. The roughness of a filling may be the cause of the tongue pressing constantly against one particular tooth. These and any other unmentioned tongue habits will have an undesired ill effect on the occlusion if repeated to the extent of disturbing the normal oral muscle balance.

The correction of tongue habits is a difficult and often inconclusive problem. It is most essential, however, if

the trend toward malocclusion is to be halted. If the treatment of malocclusions, resulting from tongue habits, are to be successful the habits must be completely overcome for all time. In very young children mechanical appliances cemented to the teeth might occasionally be utilized. It is questionable how beneficial this treatment may prove and except in extreme conditions is probably ill advised. When the child becomes of school age or older the problem can be approached from a reasoning point of view. The success obtained is directly proportional to the will for cooperation that the dentist can instil in the child patient. This calls for a good psychological, appealing approach on behalf of the dentist in order to gain the desired cooperation. The patient should be instructed to place the tongue in desirable positions while at rest and while swallowing. The tongue at rest should passively fill the vault of the mouth, with the tip of the tongue curled slightly down to barely touch the lower anterior teeth. The desired tongue tip position can be secured by pursing the lips to whistle. The importance of this tongue rest position should be impressed upon the patient. To correct the swallowing habit it is advisable to have the patient practise swallowing with the lips closed, the posterior teeth in occlusion and the tip of the tongue curled down as in whistling. At first this is difficult but practised with three or four small glasses of water daily it soon becomes easier and eventually a beneficial habit is established. The correction of harmful tongue habits is one of the most important steps toward re-establishing the normal lip tongue relationship and thereby the normal oral normal balance.

Lips

The lips consist of an anterior group of muscles. When their normal posture is closed they exert an inward or holding force which tends to neutralize the outward force exerted by the tongue. The muscle balance so produced aids in aligning and retaining the teeth in their correct occlusion. These muscles have bony attachments and in normal function, they stimulate surface bone growth and development of the anterior part of the face.

In mouth breathing we find the lips apart and lacking in muscular tone. The lips fail to hold the upper anterior teeth in position and if a tongue habit exists we find a decided malocclusion developing. We also find in mouth breathing that the tongue must be lowered to allow the air to pass between it and the palate of the maxilla. This leaves the vault of the mouth without the normal support and stimulation of tongue force and may be an important factor in the malformation of high vaults and narrow arches so often found in mouth breathers. Clinically we notice in mouth breathers a tenseness or wrinkling of the skin over the chin when the lips are closed. The nostrils exhibit a toneless or collapsed appearance. In rest position the lips are apart and the upper lip may show a slight tendency to curl upward. The lower lip may roll slightly outward. The tongue may display a definite centre crease. The general appearance shows a deficiency in basal bone growth sometimes to the extent of giving the individual a "caved in" appearance in the region of the nostrils.

Mouth breathing may have several causes. One of early origin is the presence of enlarged adenoids, which makes breathing through the nose rather difficult. Bony growths may narrow the nasal air channels. Allergies as exhibited by hay fever result in inflamed nasal membrane and although seasonal in nature may still cause the child to develop into a persistent mouth breather. In some cases mouth breathing is thought to be but part of the clinical picture of a child with a dull mental outlook reflecting a subnormal or delayed upper motor neurone.

The correction of mouth breathing, if of a short duration, will in many cases occur by itself with the removal of adenoids or other offending cause. Where the habit is of a longer duration more drastic steps may be needed to implement normal lip closure. First the lips should be exercised to restore muscle tone. This can be done by closing the lips and blowing under the upper lip. Hold this under pressure for a count of four and relax. Repeat this about twenty-five times, three to four times daily. This exercise may be applied to the lower lip if indicated. A variation of this exercise is to squish water between the teeth and under the lips and hold under pressure the same as outlined with air. Trying to blow a pencil or feather off a table at about four feet is another exercise. An endeavour should be made to have the child keep the lips closed while chewing his food. This gives the lips a functional exercise. Food and drink should not be mixed at a meal. In swallowing a good-sized morsel of resistant food the teeth are set and the lips held firmly with a certain sense of determination and proper direction of effort. This evercises and stimulates both normal lip and tongue action. A child may be instructed to hold a piece of cardboard, about one inch by one half inch, between the outer edges of the lips while doing homework, reading and at other odd times. This aids the child in keeping the lips closed and without too much actual concentration.

By the frequent repetition of "I must keep my lips closed and breathe through my nose," the child can by a system of self-reminding bring the posture of the lips from the subconscious mind into the conscious. This wilful lip closure may eventually become a habit with the desired results. The parents may help in this lip therapy by means of an agreed upon silent reminder. For example, whenever the mother observes the child's lips open she merely strokes her chin, touches her ear lobe or gives other agreed on signals and thereby inoffensively reminds the child that the lips are open. With a young child this becomes a game in which the child endeavours to remind the parent of open lips more often than he is reminded. If the lips are to reach the stage of normal closure they must remain closed more than open. To attain this degree of closure for over twelve hours a day it is obvious that intermittent closure during the day alone is not sufficient to overcome the effect of open lips during sleep, speech etc. In cases where patient cooperation is good, it is advisable for the lips to be sealed by the child upon retiring. For this purpose two 2½ to 3 inch pieces of ¼ inch wide cellulose tape are placed over the lips in the form of an X. This is continued nightly until the lips close normally without showing a tenseness or puckering of the skin over the chin.

All of these suggestions are but aids toward accomplishing the necessary lip closure. The rate at which the desired result is obtained of course depends on the degree of patient cooperation. This often hinges on the way in which the dentist can psychologically appeal to the child. Young children usually lack any real desire to close their lips and plenty of praise upon the part of both parents and dentist may be necessary to get the child to persist in the necessary exercises.

Thumb Sucking

The sucking habit most often exemplified in thumb sucking is a controversial subject that has been bandied about by pediatricians, pyschologists and dentists until parents are often at a loss as to whose advice to take. It is felt that unless the sucking habit persists beyond three or four years of age very little if any permanent malocclusion may result. We also know that the majority of thumb suckers stop the habit by that age. It still remains however that persistent thumb sucking does harm the occlusion. Since dentists cannot predict in

which children the habit will persist each and every thumb sucker must be regarded as a possible case of malocclusion in the future. Psychologists have advanced the idea that a parent by trying to break the habit may psychologically upset the child and that this may even go as far as to strain the parent-child relationship in the home; a spanking does likewise, but rarely does the parent let this deter him if the spanking seems indicated. A possible mental upset as a child is hardly to be compared in importance to the mental anguish the child, as an older individual, will undergo at the hands of society as a result of "buck" teeth of the thumb sucking variety. This combined with the thought of possible future orthodontic corrective treatment far outweighs any concern the parent will feel regarding a possible mental upset incurred by an attempt at habit breaking.

There are a number of different methods of thumb sucking, each with its accompanying effect up on the occlusion. The usual method is for the thumb to be placed on the premaxillary area of the palate, nail down and resting lightly on the incisal edges of the lower anterior teeth. The tongue touches the nail side of the thumb forward as far as the incisal tips of the lower anteriors. The lips close over the thumb usually between the first and second joint. The tongue helps to create a suction by lowering in the centre along its length. Sucking in this position tends to stimulate forward and upward tipping of the premaxillary bone and teeth. The sucking in of the cheeks hinders lateral growth in the upper arch particularly. The result is a high vault, narrow arch and protruding upper front teeth. There are variations in this habit. Those biting and sucking just the tip of the thumb may evidence an open bite with little or no protrusion or contraction of the upper arch. The other extreme may be evidenced in a child who places the thumb far into the mouth and closes the lips on the soft tissue well above the second joint. In this type the lips are usually rolled outward with the lips at rest, showing a large more rounded opening which gives the child a dull and more listless appearance. Some children emphasize the upward and outward force by curving the index finger over the nose. Finger sucking may create a downward and backward force on the mandible which tends toward a retruding chin and open bite. It is wise to keep in mind that all children, who put their thumbs or fingers in their mouth, do not end up with a malocclusion. The amount of malocclusion produced is dependent on the intensity and duration of the habit and to what extent the habit may upset the normal oral muscle balance.

Causes of Thumb Sucking

Sucking is one of the child's first experiences in life. It supplies him with nourishment and comfort until the teeth erupt. At that time the failure to introduce more solid foods into his diet as well as drinking from a cup or glass may be responsible for prolonging the sucking instinct and thereby lay the foundation for the perversion of the sucking habit. The sucking habit is usually the result of fatigue, irritation, frustration or association. The irritation attending the cutting of teeth usually prompts the introduction of a finger or thumb into the mouth. Frustration caused by insufficient food, disappointment, punishment, unhappiness etc. may also give rise to the baby's only agreeable sensation—that of sucking. During feeding periods such objects as wool blankets, teddy bears, silk blanket binding, hair, flesh etc. may be present. The baby, becoming a little older, comes to associate these things with the agreeable sensation of feeding. In the future upon encountering any such object the association may give rise to the feeding desire and the

thumb is introduced to stimulate the sucking of that satisfactory period. In older children the feeling of insecurity often produced by an over conscientious and correcting parent or even by dissention between parents in the home, may give rise to the comfort seeking device of thumb sucking. Lack of encouragement and parental affection, accompanied by criticism may cause a child to feel unwanted and result in the escape mechanism of thumb sucking.

The Correction of Thumb Sucking

The correction of thumb sucking is fundamentally a psychological problem and should be approached as such. Since the sucking instinct is highly developed shortly after birth it must be admitted that every baby could develop into a thumb sucker if conditions were such as to foster or provoke the perversion of the sucking habit. With this in mind every attempt should be made to prevent the habit forming by limiting conditions under which it may be started. To be specific a baby should be sufficiently nourished and tenderly fondled to be made to feel satisfied, secure and wanted. Since a good deal of thumb sucking begins and is carried on in bed, the use of a "snuggle-bunny" covering would prevent the habit and still not frustrate the baby by undue restriction. If tied securely to the bars of the baby's crib, the snuggle-bunny can be safely used from an early age and thereby possibly prevent the habit ever beginning.

If the thumb sucking habit has just begun the use of mitts for a few days may prevent the habit developing. Where the habit is well developed in a young child the use of thumb guards, arm splints, bitter tasting substances incorporated into nail polish on the finger nails, aluminum mitts etc. may be tried. A metal bar, with sharp spurs, attached to crowns cemented on the deciduous cuspids may be a justified corrective procedure in the odd case. Where mechanical or restrictive measures are taken to suddenly break thumb sucking the child should be closely observed to make sure that tongue sucking, stuttering or some less desirable habit does not develop in its place. If such does occur that particular method of habit correction should be discontinued, at least for some time.

With a child of school age or better it is felt that plenty of praise during the day is the best method of gradually reducing the habit time. At night a peaceful quiet story to think about while going to sleep may help the child overcome the desire to suck the thumb. The idea of putting the thumb to sleep in its house (palm of the hand) covered by the other four fingers sometimes appeals to the child. In some cases the wearing of boxing gloves at night may be made to sound like a game or reward, particularly if the child is looking forward to boxing his daddy in the morning. Other methods may be devised by the parents as a result of some particular incident in the home. In so far as possible the wilful cooperation of the child should be sought in the acceptance of any method of restraint. In spite of trying every known means of correction, some children will still continue to suck the thumb whenever the opportunity presents itself. In these extreme cases the parent should keep in mind that the more the thumb can be discouraged from entering the mouth the less will be the harmful effects upon the child's occlusion.

Other Habits

Biting the lower lip tends to create an outward pressure. It is sometimes mimicked from a parent. In cases where the upper anterior teeth protrude the lower lip may lie behind them even at rest. This position may give rise to, or be the result of, lip sucking. Lip sucking like tongue sucking is a difficult habit to discourage. It may occur almost constantly or merely be associated with swallowing. Where the habit is sufficiently devel-

oped a sharp horizontal crease will be noted about half way between the edge of the lower lip and the point of the chin. The lip is sucked in and up creating a force in on the lower anteriors and out on the upper anteriors. A plastic labial shield will help correct and overcome these lip habits if worn sufficiently. If the child is old enough to cooperate he should insert the shield at night and tape the lips with cellulose tape. This will prevent the lower lip being sucked up between the teeth and at the same time help reposition and strengthen the lips.

Sleeping on the arm or hand, or resting the head with the hand pressed against the cheek will be recognized by a raised line of tissue inside the cheek from cuspid to molar region. If sufficiently practised these habits may cause a narrowing of the dental arches. Resting the chin on the hand or hands may have the effect of hindering vertical growth of the lower third of the face and thereby contribute to the establishment of a closed bite and retruded mandible. The child's cooperation can usually be obtained to overcome these posture habits voluntarily.

Other habits such as pencil biting, biting the membrane at the corners of the mouth etc. make up a miscellaneous group which may have some slight undesirable effects on the occlusion. They are rarely habits from which the child derives much satisfaction and usually can be readily given up upon request.

It has been shown what a big stumbling block habits can be to the prevention and correction of dental irregularities. In this present day and age we all appreciate that teeth not only masticate our food but also play a very important part in our smiles, our personalities and the way in which we are accepted in every day society. With this in mind perhaps the dentist should pay a little more attention to these seemingly harmless and unimportant habits which if allowed full rein may, in the future, interfere with many of his patients' very way of life.

Many well-meaning persons are being persuaded to support a campaign which can only end in state medicine. They begin with the undebatable proposition that every American should have the best possible medical care. From that they leap to the conclusion that every American can obtain that care under a system whereby the government furnishes it free to all citizens.

The evidence does not support that conclusion. The men, women and children of Britain and other European nations who are living under state medicine, and cradle to the grave security programs, are not now receiving as good dental care as even those Americans who are treated in free clinics. The doctors and dentists in those countries are losing both their professional standing and their professional opportunity and are being reduced to the level of government clerks. It is not by accident that the important recent discoveries in every field of medicine have come from free enterprise systems.

We have come a long way in this country. The consistent progress we have made justifies our faith that we are on the right road. That road is the road of hard work and individual initiative, the road of political, economic and scientific freedom. We still have far to go before we achieve our ideals of human progress and happiness. We shall never reach them if we are distracted by the lures of Socialism and shift to the state our obligation to help ourselves.—Former Governor Green of Illinois in the Dental Assistant, June 1949.

"Vigour and abundance of voluntary action outside the citizen's home, both individually and in association with others, for bettering his own and his fellows' lives, are the distinguishing marks of a truly free society."

The Relation of the Endocrines to Dental Development and Oral Health*

By MORTON R. LANG, B.Sc., Faculty of Dentistry, McGill University, Montreal, Que.

"In order to cure the human body it is necessary to have the knowledge of the whole of things"—
Hippocrates.

WITHIN recent years painstaking research has accumulated a mass of evidence pointing to a surprisingly delicate sensitivity of dental and oral tissues to various endocrine dysfunctions. Although the objective of this paper is to discuss endocrine influences only, it must be remembered at all times that the endocrines are only one cornerstone of the highly complex and marvelous biological phenomenon termed "tissue metabolism" which is the foundation of growth, development and the maintenance of health of the organism. The diet, the vitamins and the environment, internal and external, are the other three cornerstones and must not be lost sight of in any discussion such as this.

According to Schour et al. [31], [32], [33], the tooth is a delicate indicator of metabolic disturbances, particularly calcium metabolism, and endocrine influence in many cases is sufficiently characteristic so that radiographic and histologic examinations of a tooth may diagnose experimental conditions without a knowledge of the laboratory records. However, metabolic disturbances and endocrine dysfunction affect the teeth not because they are specific for the teeth alone, but because the tooth is a vital part of the whole organism. Any consideration of the interrelationships between the teeth, their adnexa and the endocrine system must always be in their relationship to the body as a whole. Briefly, these interrelationships may be summarized as follows: [21].

A) The influence of the endocrines upon growth and development of dental structures.

B) The influence of dental and stomatologic disturbances on the remainder of the body.

C) The influence of endocrine dysfunction upon dental and stomatologic organs in view of the generalized effect.

Because of the vastness of this topic and its importance to the practitioner this discussion will be dealt with under two separate headings, namely:— The Relation of the Endocrines to Dental Development and The Relation of the Endocrines to Oral Health. This is not to be construed that they are two separate entities, but should be considered as an interdependent and inseparable continuity.

The Endocrine Glands

"We are what we are bodily, mentally, sexually, emotionally, facially, largely through the balance or imbalance of certain secretions discharged in minute quantities into the blood by the ductless glands."—Garrison.

The endocrine secretions or hormones are physiologic organic catalysts produced by certain cells comprising the ductless gland system. They are secreted, or more correctly increted, for the sole purpose of directing, regulating and co-ordinating the activities of the organism. The hormones act on target organs as catalysts that accelerate or decelerate inherent activity at any particular moment but do not bring about any essentially new metabolic activity. Because they are only regulators, the intensity of their effect will differ in growing and non-growing tissues and the results will

*First Prize Essay in the Canadian Dental Association War Memorial Scholarship Competition.

vary with the age of the patient. Thus, dysfunction at an early age will produce largely developmental anomalies but at a later age will be largely a matter of health.

According to Selye [34] the mechanism of hormonal action may be divided into three types:

A) Directly acting hormones which act upon the target directly and not through the intermediary of other organs.

B) Indirectly acting hormones which do not affect target organs at all. These act upon another organ, usually another endocrine gland, and stimulate it to produce a hormone which affects a target organ.

C) Conditionally acting hormones which are directly acting ones, yet, depending on circumstances, receptive cells may or may not respond.

The endocrine organs are mostly regulated by stimuli from trophic hormones produced by the anterior lobe of the pituitary or "master gland" in order to co-ordinate the function of the peripheral endocrines to the needs of the organism. To stabilize the activity of trophic hormones their secretion is in turn regulated by secretions of the peripheral glands. The complexity of the interrelationships between the endocrine glands is well illustrated by Diagram 1 based on one in Zondek's text [41].

In the large amount of literature that has accumulated on the subject nearly all the glands have been associated with dental and oral development and health. In many cases a definite relationship is based on theory evolved from experimental evidence

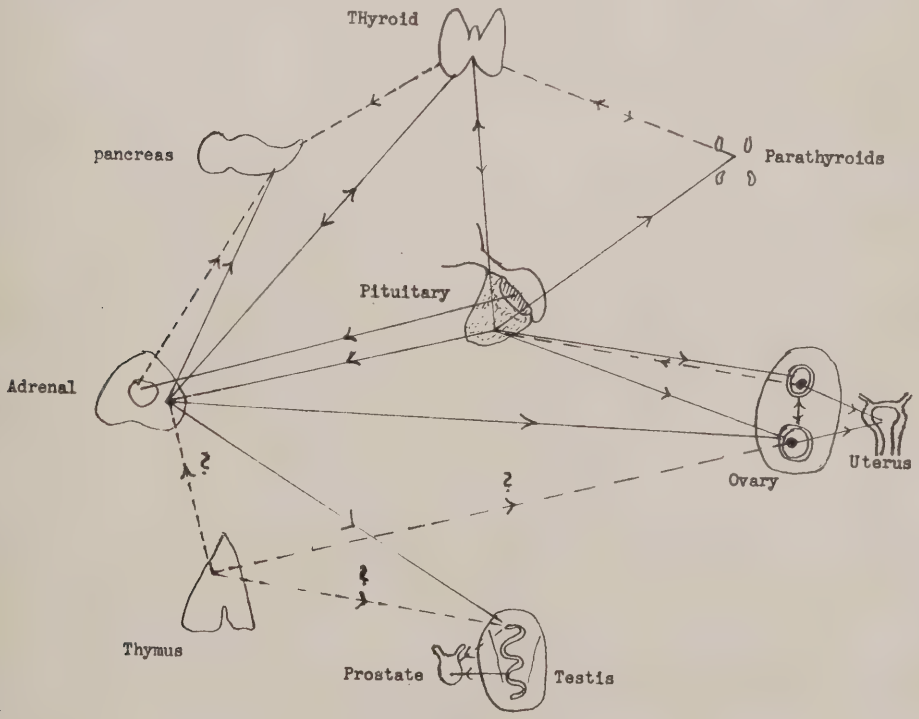

DIAGRAM 1.

Glandular Interrelationships: Solid lines indicate synergism or stimulation, dotted lines antagonism or inhibition. Arrows show direction of reactions. Question marks show possibilities without adequate evidence. (Based on diagram in Zondek's textbook "The Diseases of Endocrine Glands.")

which in numerous cases is still controversial and cannot have clinical application.

The endocrine glands influencing dental development and oral health to a greater or lesser degree may be listed as follows: the pineal, the pituitary, the thyroid, the parathyroids, the thymus, the pancreas, the adrenals and the gonads (testes and ovaries).

The Relationship of the Endocrines To Dental Development

> *"Among the students of man there is a suspicion amounting to virtual certainty that the numerous anatomic variants are sorted into racial physical combinations through the activities of certain glands of the body"—Hooton.*

It has been pointed out already that dental development and oral health cannot be discussed without consideration of their relation to the body as a whole. By the same form of reasoning, dental development cannot be discussed adequately without a consideration of the growth and development of the dental adnexae—the jaws and face, for they intimately influence the normal development of the teeth and are in turn affected to a strong degree by the development of the dentition. This is particularly true when such a discussion is in relation to the endocrines, since the ductless glands in nearly every case act to co-ordinate the development of the bony skeleton of the face and the teeth.

It is a readily observed fact that there is a marked change in proportion of face to cranium from the child at birth to that of the adult. Brodie[6] has shown that if ratio of face to cranium of the adult is 1:1 then at birth it is 1:6 or 1:8. During intrauterine development the head grows largely in antero-posterior direction and in width. After birth the greater development is in the vertical direction. One of the factors controlling normal development in the vertical dimension is the normal development and eruption of teeth. The relatively smaller growth of the face in the antero-posterior direction and from side to side is also influenced by the normal arrangement of the teeth in the dental arches.

Rushton[28] has shown that in the case of the mandibular development, the remodelling process in the retromolar fossa as well as the occlusal development of the alveolar bone and teeth are dependent on the rate of bone apposition at the condyles. Thus the failure to develop sufficient length to accommodate third molars could be regarded as a function of insufficient condylar growth. Similarly, it has been postulated, that failure of normal eruption of the teeth producing a closed bite or marked overbite can inhibit normal mandibular development [10], [32]. Many such orthodontic anomalies may then be attributed to a failure in hormonal co-ordination during limited and precisely defined periods of development.

With the intimate developmental interrelationship between the teeth and their adnexae established, a more detailed discussion of the impact of the individual endocrines on dental development may now be undertaken.

A) *The Pituitary*

The pituitary gland is an endocrine gland of double origin. The anterior part is epithelial and obviously glandular, the posterior part is a specialized extension of the brain wall. It is based in the cella turcica in the base of the skull.[1]

The pituitary is the master gland of the body and controls nearly all the glands of the body by trophic activity. In addition, by means of anterior lobe secretion it controls growth. The gross effects of dysfunction of the gland are quantitative causing either overdevelopment or underdevelopment of those parts still undergoing growth and differentiation at the time of onset.

1) *Hyperpituitarism*

The most striking effect of hyperfunction of the pars anterior of the

pituitary, if its onset is before 6 years of age, is a proportionate general overgrowth of the body resulting in gigantism [34], [39], [44]. If hypersecretion begins after puberty then only those parts still developing are affected and disproportionately large hands, feet and jaws give the typical clinical picture of juvenile acromegaly. At a still more advanced age, hyperpituitarism results in adult acromegaly which affects largely the mandible [32].

In every case the mandibular overgrowth is accompanied by enlarged lips and tongue [2], [39]. There is a flattening out of the angle of the jaw, marked condylar proliferation and overgrowth of the alveolar process resulting in protrusion of the mandible and marked prognathism [34]. Often there is also a flattening of the palate and a widening of the maxillary arch [37]. The size of the teeth is unaffected and remains normal, since the tooth buds form early in development before the dysfunction sets in. There is a tendency, however, to an acceleration in the loss of the deciduous dentition and early eruption of the permanent set [33], [37]. The overgrowth of the alveolar processes results in supraocclusion of the teeth and greater intermaxillary space. This enlarges the circumference of the dental arches so that the normal sized teeth begin to lose proximal contact. The increased pressure from an enlarged tongue aggravates the condition and results in a fanning out of the teeth [13].

Sections of the acromegalic jaw bone show enlarged trabeculae which are poorly calcified since the rate of calcification is not proportionately increased [32]. The bone then is of poor quality. The supraeruption of the teeth is accompanied by hypercementosis and cemental exostoses [37]. These two factors, bone of inferior quality and cemental exostoses lead to extreme difficulties when extractions become necessary, and the edentulous spaces make poor denture bearing bases.

2) *Hypopituitarism*

Hypofunction of the pituitary before 6 years of age is rare, but if it does occur the result is a proportionately formed pituitary dwarf with a typical childlike face [34], [39], [44]. Schour [32] has shown that there is a definite tendency to a prolonged retention of the deciduous teeth often with ankylosis, and a retarded eruption of the permanent dentition. These two processes may so overlap that several of the two sets of teeth may appear simultaneously in some cases. Cohen and Wagner [10] have confirmed these observations by serial roentgenograms showing slowed resorption of deciduous roots and a slow axial development of the permanent teeth. The teeth, however, are not undersized but may have a persistence of juvenile characteristics, such as short roots, parallel pulpal walls and wide open foramina [13], [32]. Schour proved experimentally that progressive hypopituitarism, as in complete hypophysectomy, may lead to final cessation of eruption.

Schour and Massler [32] in their extensive research have shown that the retardation of growth of the jaws is more pronounced than the effects on the teeth. Thus when the teeth finally do erupt there is insufficient space for them and a crowding of the dentition, with frequent submerging of some teeth, particularly the lateral incisors, is common. This leads to a receding chin and marked overbite. Lichtwitz [17] and Thoma [37] confirm these observations. Due to a slowing down in the deposition of the organic matrix of the teeth without a similar retardation in the rate of calcification there is an over-calcification of the teeth which may at times encroach upon and obliterate the pulp. There may also occur a pathologic calcification of the periodontal membrane. Schour has suggested that the delayed development and eruption of the dentition may be a secondary effect of hypopituitarism, the primary effect being a diminution

of the blood supply and nourishment to the developing teeth.

B) *The Pineal*

The role of the pineal in dental development is doubtful. Tumours of the gland give rise to precocious puberty and mental, genital and somatic precocity.

C) *The Thyroid*

The thyroid is an H-shaped gland which embraces the ventral surface of the larynx. It controls primarily differentiation of tissue in the developing organism and is concerned largely with tissue metabolism. Along with the parathyroids it participates in calcium metabolism. Growth is affected only secondarily [39].

1) *Hyperthyroidism*

This condition is rare in childhood and if at all present is usually brief since today surgical removal of part of the thyroid is easily performed. When hyperthyroidism is present the outstanding manifestations are an increased B. M. R., a raised temperature, nervousness, and exophthalmos in advanced stages.

Accompanying the increased rate of metabolism is an increased rate of growth and differentiation. The deciduous teeth erupt prematurely and are shed early—often at 3½ years of age and the permanent dentition is complete by 9 years of age. The teeth of hyperthyroid individuals have been described as "firm, transparent, graceful and with a bluish tinge" [9]. When the hyperfunction involves calcium metabolism, however, then conditions similar to hyperparathyroidism may result with osteoporosis and resorption of alveolar crests, abnormal arrangement of odontoblasts and poorly formed denture. [38]

2) *Hypothyroidism*

The most marked effects of hypothyroidism are produced if the dysfunction sets in before or soon after birth. At that time all tissues are actively growing and therefore depressed by the resulting low B. M. R. and slowed rate of tissue metabolism. The result of hypofunction is either cretinism, juvenile myxedema or adult myxedema, the first being the most severe. All, however, follow the same pattern more or less but the effects upon development are decreased as the age of the patient at the time of onset increases because more and more tissues have attained normal development. [34]

The cretin is a pathetic disproportionate dwarf with an idiotic facial expression and of low mentality. He tends toward adiposity with a protruded enlarged tongue resting between the anterior teeth of the opposing dental arches. The face fails to attain its normal size and the nose is flat and wide with a depressed nasal bridge. The fontanelles may fail to close until puberty. [32]

There is a retarded ossification of the jaws with osteoporosis, particularly of the mandible which is usually protruded. The enamel, dentine and cementum of the teeth are essentially normal but the teeth retain infantile characteristics and both dentitions are slow in erupting. Exfoliation of the deciduous set is also retarded. [37] The permanent teeth appear irregularly, often in transversion, and first molars frequently erupt with cusps separated. [9] Some teeth may fail to appear entirely. Those teeth that do erupt may be of such poor quality that they easily fracture in function. [9] The underdeveloped jaws predispose to crowding of the teeth.

D) *The Parathyroids*

The parathyroids are four almond-shaped bodies embedded in the dorsal surface of the thyroid and have often been termed "The Endocrines of the Dentist" because of their intimate association with the normal calcification of the teeth and jaws. Their chief function is the maintenance of the calcium-phosphorus equilibrium and the calcium level of the blood.

1) *Hyperparathyroidism*

Hyperparathyroidism is essentially a

disease involving a depletion of calcium from the natural reserves accompanied by a high serum calcium and its elimination in the urine. The disease is associated with an acute condition in osteitis fibrosa cystica. The bones show pronounced osteoclasis resulting in osteoporosis and the development of unilocular cysts. The jaws show fine trabeculae poorly calcified and closely intermeshed and in an uncontrolled patient may become so soft that they can be moulded by hand pressure.[14] The teeth become loose and drift and are frequently unnecessarily extracted when the endocrinopathy should be treated.

There is no removal of calcium from the completely formed teeeh but the developing tooth is so sensitive to hyperparathyroidism that the suggestion has been made that it be used for biological assay for parathormone[32]. Strangely enough, the developing tooth is hypercalcified at the expense of bone depletion. The hypercalcification is often carried to a point where there is a general tissue calcification including that of the pulp. In recurrent attacks stripes of hypercalcified dentine corresponding to each attack may be demonstrated histologically.

2) *Hypoparathyroidism*

Parathyroid hypofunction is a relatively frequent transitory condition in childhood. It is manifested by hypocalcimia and parathyroprivic tetany. Although growth is normal the developing teeth show disturbances of enamel and dentine formation. The normal physiological activity of the enamel epithelium is interfered with and may fail entirely so that clinically visible hypoplastic defects may result. The dentine is poorly calcified and shows vascular inclusions. The enamel is usually affected later than the dentine. The result is usually a weak tooth which is susceptible to caries invasion and frequently to fracture during function. An attack of hypoparathyroidism during infancy which is later corrected may result in an open bite malocclusion due to failure of normal development of the anterior teeth but subsequently normally developed posteriors.

E) *The Thymus*

Little is known of the function of this gland. Precocious development is attributed to hyperfunction and is probably due to an earlier than normal attainment of the inherent growth potential of the organism, but it is not surpassed. Precocity is accompanied by early development and eruption of the teeth which appear bluish white. They are, however, irregular in development and size so that centrals may be larger than normal, the laterals smaller and the cuspids without their fang-like character.

F) *The Pancreas*

Pancreatic dysfunction is rare in early childhood and little is known of its influences on development. Diabetic infantilism has been reported resulting in childlike skeleton and facial feature and due to a lowered rate of growth[34].

G) *The Adrenals*

These glands are largely associated with salt and water metabolism and the "emergency reaction" of the body by virtue of the adrenocortical hormone and adrenalin of the medulla. Their relation to development, if any, is little understood. Hypofunction has been associated with inhibited growth and over-calcification of bone and teeth due to a normal rate of calcification.

H) *The Gonads*

The gonadal function is exocrine and endocrine, the former being responsible for the production of the reproductive cells. The endocrine function of the gonads affects development only secondarily, largely through its trophic equilibrium with the pituitary, but is primarily associated with the development of the secondary sexual characteristics differentiating male and female.

1) *Hypergonadism*

Hypergonadism results in precocious

puberty and accelerates all maturation processes. The skeletal and somatic development is rapid, as if the growth potential has to be used up in a short time before the trophic effect will slow pituitary secretion. The individual fails to attain normal size, but is proportionate, very muscular with hirsutism a prominent feature.

Accompanying the general acceleration there is a speeding up of enamel and dentine formation and early eruption of the teeth but not to the same extent as the general effect.

2) *Hypogonadism*

If gonadal hypofunction is present from an early age eunuchoid gigantism and immaturity result. There is a disproportionate overdevelopment of the extremities with an underdeveloped musculature. The face remains childlike but oversize with massive jaws but short ramus. There are but few effects on teeth if the condition manifests itself after six years of age but it is reported that in ovarian aplasia or agenesis one of the congenital abnormalities are missing upper laterals[34].

The Relation Of The Endocrines to Oral Health

"The individual is only a locus wherein life forces are."
W. E. Ritter

Although normal health is closely depended upon normal development, abnormal health can develop at an age when normal development is complete. The endocrines can therefore influence the health of an individual at an age when they can no longer affect his development.

The role of the endocrines in oral health and production of dental disease is not yet definitely established. Thus far relations of endocrine dysfunction to the aetiology of dental disease are not supported substantially by clinical or experimental evidence but are distinct possibilities. Certain periodontal disturbances are certainly due to endocrine imbalances since the periodontal tissues are in vital continuity with the remainder of the body and are affected in proportionate degree with other tissues. Indeed oral disturbances may often give an initial clue to endocrine disturbances.

A) *The Pituitary*

At present there is no evidence that the pituitary has any direct oral manifestations when in dysfunction. All the known effects on oral conditions are secondary reactions to an original developmental effect. The only exception perhaps is a report that in posterior lobe dysfunction resulting in diabetes insipidus there is an associated periodontoclasia. There are numerous instances of periodontal disease leading to pyorrhea associated with pituitary hypofunction but they are a direct outcome of a crowded dentition which has resulted from the hypofunction[21]. It is also possible that this condition arises from pathological calcification of the periodontal membrane in hypopituitarism causing a diminished blood supply to the paradontal tissues. Cohen et al[10] report marked caries activity with early pulp involvement and periapical infection in pituitary dwarfs and name as a possible aetiological factor the hypocalcified enamel and dentine and the hypoplastic defects. Thoma[37] reports an increased resistance to caries in cases of pituitary hyperfunction attributing it to the fact that the teeth are strong and well calcified.

1) *Adiposogenital Pituitarism*

Children with this syndrome appear 70% caries free with the remaining 30% showing only first degree caries and little or no interproximal activity. Most of them show normal occlusion with almost a classical arch relationship. This is strictly a clinical finding with no experimental evidence for it[15].

B) *Thyroid*

A study of the oral aspects of thyroid function has revealed that thyroid relationship can be studied from two points of view[7].

A) The effects of focal oral infection upon the thyroid and B) The effects of

thyroid dysfunction on oral integrity and health.

Focal infection seems to have injurious effects on the thyroid either directly due to the bacteria or their toxins or due to a disturbance in iodine metabolism. There are specific cases reported where hyperthyroidism has been aggravated by focal infection and alleviated by eradication of the focus[7].

That the thyroid influences oral conditions is evident from the fact that true paradontosis with hyperemia of the pulp is associated with hyperthyroidism. The Lahey Clinic also reports frequent caries due to poor calcification and the coexistent alveolar resorption[7]. Hyperthyroidism per se is also of great importance to the dentist in treatment planning and operative procedures since the highly excitable state of such a patient is not compatible with nerve-racking dental procedures. Because of the high B. M. R. the dentist must also exert considerable judgement in the choice of an anaesthetic. Local anaesthesia is dangerous because of the patients' excitability and the adrenalin effect. General anaesthesia is the anaesthetic of choice but to satisfy the high metabolic requirements it must provide a high oxygen content.

Hypothyroidism becomes clinically evident as myxedema. Oral manifestations of the condition are seen in the thickening of the lips, an enlarged protruding tongue, dry mouth with canker sores and sponginess of the gingiva due to an oedematous infiltration and poor circulation. This predisposes to periodontal disease. Coexistent with this generally poor oral condition is a high incidence of decay under fillings and failure of endodontic treatment presumably a result of poor circulation[7].

C) *The Parathyroids*

The influence of the parathyroids on oral conditions is largely due to their effect on calcium metabolism. Hyperparathyroid patients show diminished caries activity due to hypercalcification of the teeth but their increased brittleness predisposes them to fracture during extraction. However, the calcification of the jaws causes gingival inflammation and the poor bone makes weak denture base for natural or artifical dentition[7]. Orthodontic treatment for the hyperthyroid child is inadvisable without treating the endocrine condition first since the alveolar bone is a weak support to the teeth during orthodontic movement.

Hyperparathyroidism is a condition which the dentist should be aware of not only because of its predisposition to caries due to poorly calcified teeth, but also because of the possibility of an attack of tetany which may be precipitated by operative procedures.

D) *The Thymus*

Little is known of thymic influence upon oral health. It is reported that thymic hyperactivity may result in poor enamel formation predisposing to early caries[40]. There also appears some correlation between overactivity of the thymus and incidence of pyorrhea. Persistence of an enlarged thymus leads to what is known as status lymphaticus. If that condition does develop the dentist should be aware of it and must exercise great caution in the choice of anaesthetic since the administration of an anaesthetic may lead to collapse and sudden death.

E) *The Pancreas*

Pancreatic insulin deficiency and the resulting diabetes mellitus is very debilitating to oral health. The effects may be grouped under three headings[38].

1) Disturbed Calcium Metabolism

The acidosis which accompanies diabetes produces hypercalcemia with decalcification of the bone predisposing to paradontosis[18]. This makes a diabetic a poor denture patient not only due to weak bone support but also because of the presence of acetone bodies which have a dissolving effect on acrylics.

2) Arteritis

Inflammation of the blood vessels

results in poor circulation with low tissue vitality and low resistance to infection. This predisposes the patient to periodontal involvement. Polypoid proliferations under the free margins of the gingiva with pus formation and frequent painless gingival abscesses are almost diagnostic for a diabetic. Strict oral hygiene must be instituted and guarded and a soft bristle brush prescribed to avoid lacerations. Arterial deficiency may also result in pulp death without carious lesions and manifests itself by the sudden onset of severe pain before death[21]. Extractions should be performed with a minimum of tissue laceration and guarded against post operative haemorrhage and infection. The anaesthetic of choice is a local without adrenalin and should be given preferably from 1½ to 3 hours after breakfast when the insulin is still controlling the blood sugar level. General anaesthesia is very dangerous because of its tendency towards hyperglycemia.

3) Altered Secretions

The increase in blood sugar encourages fermentative organisms to multiply increasing the possibility of alveolodental periosteitis and necrosis of bone. Increase of carbohydrate content of the saliva and the coexistent acidosis predispose the teeth to caries and carious lesions[5]. Decay, below the cemento-enamel junction of the exposed roots, is characteristic of diabetes. The high blood sugar causes tissue dehydration due to osmotic effect and dry mouth, fruity odour and metallic taste are diagnostic symptoms.

The dentist should be aware of the problems associated with diabetes and should be wary of treating an uncontrolled patient. The dental practitioner must also be equipped to handle a patient in insulin shock or diabetic coma lest they manifest themselves in his office.

F) *The Adrenals*

A patient with Addison's disease as a result of cortical hypofunction is a serious problem to the dentist. The disease may show its earliest symptoms in the mouth, brownish pigmentation of the mucosa, bleeding gingiva and atrophy of bone being characteristic[21]. Oral infections must be handled with great care and the patient should be warned of the need for medical treatment and the danger of infection. Antibiotic therapy should be instituted prior to surgery and post-operatively and the surgery performed with a minimum of tissue damage to avoid precipitation of an adrenal crisis. Anaesthesia of any sort is dangerous, a local anaestheic without vaso-constrictor being the least harmful.

G) *The Gonads*

Sex hormone activity presents marked oral manifestations particularly in the female. In both sexes there occurs a sudden increase in caries incidence at puberty as a result of changed hormonal tides. In some cases there may even appear gingival hyperplasia and alveolar atrophy and in the female there often occurs a periodic congestion of the gingiva with bleeding, coinciding with the menstrual cycle[21]. It has been shown experimentally that oestrogenic hormones stimulate gingival hyperkeratinization with increased resistance to infection [22, 41, 42]. At the menopause the oral mucosa participates in the general process of tissue aging and the normally pink tissue may become pale and appear anaemic or even show whitish patches. The cyclic periodontal condition, however, may clear up. Patients often complain of burning mouth, flatness of taste and dryness, all of which make adaptation to dentures extremely difficult[26].

Pregnancy presents special problems. There may be an increase in caries incidence but that is due largely to neglect in oral hygiene complicated by the presence of sordes and acid metabolites from nausea and vomiting. Characteristic gingivitis with marginal bleeding and raspberry gums with pregnancy tumours may manifest themselves as a result of the tempor-

ary endocrine imbalance. The patient must be handled with care and sympathy particularly as term is approached, and when necessary, operative procedures should be short and as painless as possible. In any case the periodontal manifestations, if controlled, are only temporary and will clear up following delivery of the foetus[21].

Discussion

"One might say, without fear of exaggeration, that not a single hair grows, not a single nail bends, not one tiny cell proliferates, in fact, no tissue functions, unless directed by the endocrine glands."
Biedl.

In this paper an attempt has been made to discuss the existing knowledge of the relation of the endocrines to dental development and oral health. This knowledge is of two-fold value for it aids in early diagnosis and clarifies the normal process of growth, development and metabolism. Great strides have been made in the endeavour to acquire an understanding of the relationship in the past two decades and though much has been gained, the role of the endocrines in the theatre of operation of the dentist —namely the dento-facial area—is as yet not definitely established. Furthermore, particularly as concerns growth and development, hormonal disharmony which begins to act as early as during intrauterine life is, strictly speaking not a dental problem and its treatment because of its general bodily effect is in the hands of the clinical endocrinologist. The dentist, however, should have a good knowledge of the oral manifestation of endocrinopathy in that when he recognizes them, he can take the proper consideration and work out his treatment plans of the local conditions in consultation with a qualified physician.

In summary, specific situations which are strictly the dentist's problem, but which may occur on a background of endocrine dysfunction and will then require a knowledge of hormonal influence may be discussed briefly:

Malocclusion:

Severe endocrinopathies involving disturbances of osseous and dental growth and development will disturb the occlusion. The vast majority of malocclusions have no endocrine aetiology, being due more often to hereditary or acquired conditions. Malocclusion with suspected endocrine aetiology should not be treated as a local condition nor should the orthodontist attempt hormonal therapy. Hormonal therapy is indicated only when a lone endocrine aetiology is definitely established and the maldevelopment is still reversible and should be performed by the internist.

Caries:

The aetiology of caries is so indefinite and widespread that correlation with endocrine dysfunction is difficult. Abnormal function of certain glands may certainly predispose a tooth to carious invasion either by exposing the dentine as in enamel hypoplasia or by producing oral conditions which favour aciduric organism thought to be aetiological, as in acid saliva of diabetes. The fact that exacerbation of caries appears at puberty is also suggestive but distinct evidence is lacking.

Periodontal Disease:

It is not justified to assume that any large percentage of periodontoclasia is due to endocrine disorders, but some cases do have an hormonal background and will respond to hormonal therapy. Nutritional, systemic and local factors, are still predominantly aetiological in periodontal diseases.

Dental Surgery:

Whereas certain endocrine disturbance may predispose to a necessity for early dental extraction it will do so as a result of bringing about one of the above discussed conditions. The dental surgeon, however, must understand possible endocrine complications so that he may take the proper precautions in selecting the anaesthetic,

determining the method of extraction and protecting the patient against post-operative infection.

Prosthodontia:

The prosthodontist who plays the final act in the tragedy of a lost natural dentition must also be fully aware of the influence of the endocrines on oral health when he attempts the restoration of proper function. In this case, however, the understanding of endocrinopathics must be from the view of what influence the dysfunction will have on the support of the restoration whether it be an abutment tooth, the alveolar process or both.

Conclusion

"Though one may say that I have said nothing new, the arrangement of the material is my own."

Pascal.

The endocrine glands are of considerable importance to the dentist since they are intimately involved in the calcification of bones and teeth, in dental development and facial growth and may be aetiologic in certain cases of stomatitis, dental and periodontal disease. The dentist of today is a specialist in the healing art and the old concept of a dentist as a "tooth puller" or mechanic filling cavities or restoring lost teeth must be eliminated both in the profession and among the public at large. While dentistry must hold fast to the accomplishments in the mechanical art and strive to improve existing techniques, the dental practitioner must assume the rightful title of specialist of the oral cavity. To assume and hold such a position the dentist must progress in the field of prevention. This can be accomplished only by further and more extensive biologic research and experimental study. The dentist must be the guardian of the hard and soft structures of the mouth. With a good knowledge of biological principles, an attitude that the oral cavity is part of the organism as a whole, and a keen eye, he can be a diagnostician who can detect an incipient disease state and advise the patient to seek medical treatment before it is too late. He must also recognize the futility of correction of a local abnormality without seeking and resolving that basic aetiological factor. But above all, he must look forward to the future with the hope that it will bring a wider use of the experimental method of research and a closer understanding between the experimenter and the clinician.

BIBLIOGRAPHY

1. AREY, L. B. Deve'opmental Anatomy—4th ed. W. B. Saunders & Co. 1940.
2. BATES, C. J. Oral Diseases of Metabolic Origin—The Meharri-Dent., J. Ewell-Neil, D. Soc. 4: 4-5, March 1947.
3. BERENDTH, H. Case Report of Partial Anodontia Connected with Missing and Stunted Phalanges of Hands and Feet. Oral Surgery, Oral Medicine, Oral Pathology 1: 283-289, March 1948.
4. BRANER, J. C. Systemic and Local Factors in Periodontic Problems of the Child's Mouth—J. A. D. A. 30: 45-57, 1943.
5. BRODERICK, F. W. The Principles of Dental Medicine—C. S. Mosby & Co. 1939.
6. BRODEI, O. G. On Growth of Jaws and Eruption of Teeth—J. Can. D. A. 8: 534-46, 1942.
7. BURKETT, L. W. Oral Medicine—2nd ed. J. B. Lippincott, 1946.
8. CHAPMAN, M. R. Endocrinology and Dentistry—J. Can. D. A. 13: 365-70, 1947.
9. CIARAMELLO, A. J. The Thyroid Gland and its Relation to the Dentition—Tuft's Dental Outlook 21: 12-17, Sept. 1947.
10. COHEN. M. M. and Wagner, R. Dental Development in Pituitary Dwarfism—J. Dent. Res. 27: 445-58, 1948.
11. FELDMAN, N. S. Endocrines and their Oral Manifestations—Temple Dent. Rev. 17: 9-13, February 1947.
12. GLICKMAN, I. The Relation of Experimental Diabetes to Periodontal Disease—Am. J. Ortho. and Oral Surg. 33: 703-22, 1947.
13. GORDON, S. M. Dental Science and Dental Art—Lea and Feibiger, 1938.
14. HARGROVE, T. A. Glandular and General Systemic Factors in Process of Decay—J. A. D. A. 29: 103-17, 1942.
15. HEINZE, R. L. and LUSTERMAN, E. A. Adiposogenital Pituitarism—J. Dent. Soc. N.Y. 8: 26-32, 1941.
16. LEVY, M. D. Influence of the Endocrines on the Teeth and Jaws—Am. J. Ortho. 26: 671-80, 1946.
17. LICHTWITZ, L. Role of Endocrinology in Orthodontics—Am. J. Ortho. 24: 1009-18, 1938.
18. LOVESTADT, L. A. Periodontoclasia in Diabetes Mellitus.—J. A. D. A. 30: 273, 1943.
19. MARKUS, M. B. Facial Development in Hypopituitary Dwarfism—Am. J. Ortho. and Oral Surg. 28: 334, 1942.
20. McCULLAGH, E. P. and RESCH, C. A. Some Endocrine Factors in Dental Development and Maintenance—J. A. D. A. 28: 1436-46, 1941.
21. MILLER, S. C. Textbook of Periodontia—2nd ed. Blakiston Co., 1943.
22. NATHANSON, I. J. and WEISBERGER, D. B. Treatment of Leukoplakia Buccalis and Related Lesions with Estrogenic Hormone—New Eng. J. Med. 221: 556-60, 1939.

23. NAZARIO, L. A. The Master Endocrine Gland—Dental Students Magazine 24: 17 July 1946.
24. OLSON, D. C. Endocrine Dysfunction and Dentistry—Temple Dent. Rev. 18: 6-11, April 1948.
25. PAGE, M. E. Glands and Dentistry, Oral Health 35:348, May 1946.
26. RICHMAN, M. J. and ABARBAND, A. R. Effects of Estradiol, Testosterone, Diethylstilbestrol and several of their derivatives upon the Human Mucous Membrances—J. A. D. A. 30: 913-231, 1943.
27. RONY, H. R. Endocrine Glands and Dentistry—J. A. D. A. 21: 1651-59, 1934.
28. RUSHTON, M. A. Some Aspects of Antero-posterior Growth of the Mandible—Dental Record 68: 80-88, 1948.
29. RUTLEDGE, C. E. Oral and Roentgenographic Aspects of the Teeth and Jaws of Juvenile Diabetes—J. A. D. A. 27: 1740-50, 1946.
30. SALZMAN, J. A. Principles of Orthodontics—2nd Ed. J. B. Lippincott, 1943.
31. SCHOUR, I., CHANDLER, S. B. and TWEEDY, W. R. Changes in the Teeth Following Parathyroidectomy —Am. J. Path. 13: 945-84, 1937.
32. SCHOUR, I. and Massler, M. Endocrines and Dentistry—J. A. D. A. 30: 595-603; 763-73; 943-50, 1943.
33. SCHOUR, I. Endocrines and Teeth—J. A. D. A. 21: 324, 1921.
34. SELYE, H. Textbook of Endocrinology—Acta Endocrinologica—Ude M. 1947.
35. SHEPPARD, I. M. Oral Manifestations of Diabetes Mellitus, a Study in 100 Cases—J. A. D. A. 29: 1188-92, 1942.
36. STRAVITSKY, B. Oral Aspect of Diabetes Mellitus—Penn. Dent. J. 51: 8-10, Oct. 1947.
37. THOMA, K. H. Oral Pathology— C. V. Mosby Co., 1941.
38. THOMA, K. H. Clinical Pathology of the Jaws—1st Ed. C. Thomas Co., 1934.
39. WOLF, W. Endocrinology in Modern Practice—W. B. Saunders Co., 1939.
40. WOLF, W. Oral Manifestation of Endocrine Dysfunction—in Miller, S. C. Textbook of Periodontia—2nd Ed. Blakiston Co., 1943.
41. ZISKIN D. E. Hormonal Therapy for Some Gingival Conditions—J. Dent. Res. 18: 329-41, 1939.
42. ZISKIN, D. E. Effects of Certain Hormones on Gingival and Oral Mucous Membranes—J. A. D. A. 25: 422-26, 1938.
43. ZISKIN, D. E. and Ness, G. J. Pregnancy Gingivitis: History Classification and Etiology—J. Ortho. and Oral Surg. 32: 390-432, 1946.
44. ZONDEK, H. The Diseases of Endocrine Glands as Translated by C. Praunitz —W. Wood & Co., 1936.

ANNOUNCEMENTS

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at the Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver Anniversary of the inauguration of this annual event.

Among those who have accepted invitations to appear on the program are:

Dr. R. O. Schlosser, Chicago — who will conduct the progressive clinic on "Immediate Complete Denture Prosthesis."
Dr. R. J. Godfrey, Toronto—"Partial Dentures."
Dr. J. P. Coupland, Ottawa—"Radiographic Technique."
Dr. J. D. Gage, Cleveland—"Use of Diamond Points."
Lt. J. R. Conant, D.C., U.S.N., Bethesda—"Periodontia."
Dr. J. A. Salzmann, New York—"Preventative Orthodontics."

M. L. Donigan, Director,
1414 Drummond St., Montreal, Que.

Toronto Academy of Dentistry

The annual dinner meeting of this Association will be held at the Royal York Hotel on October 17 at 7 p.m. President Ed. White and his program committee have been fortunate indeed to secure Mr. Gratton O'Leary of the Ottawa Journal as guest speaker. Mr. O'Leary is well qualified to speak of both National and International affairs. Members are urged to attend and visiting dentists will be welcome.

Further information from the secretary—Dr. Gordon L. Frawley, 86 Bloor St. W., Toronto.

University of Pennsylvania Graduate School of Medicine

This is an announcement of the establishment of a course in Oral Roentgenology under the Graduate School of Medicine through the facilities of the Evans Institute, University of Pennsylvania. Dr. LeRoy M. Ennis is the Director of the course, and it will be carried out through various departments of the School.

The course is to be given annually, beginning with the first week of October until the end of May with a tuition fee of $800.00. Participation in this course will lead to a candidacy for the Degree of Master of Dental Science. (M.Sc. (Dent.).)

Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.

Problem from New Brunswick

The late Doctor Edward T. Tinker of Minneapolis stated some years ago at an inlay clinic in Montreal that "If you cement a gold restoration in a cavity which has previously had a silver restoration and a part of the silver is left in the tooth, a galvanic action takes place which disintigrates the acid cement." I know personally that I have taken out faulty inlays by the score to find a piece of old *amalgam which seemed to be the cause* of the trouble. I would like to know if others have had this experience?—*J. F. Edgecombe, Saint John, N.B.*

•

Reply from British Columbia

In order to answer your "Problems in Practice" question I have talked to five local operators who do a good deal of inlay work, and the replies were as follows:

Two, including myself are in full agreement with Dr. Tinker's statement. Four gave similar answers to the effect that they had made no definite observation that cement had disintegrated as a result of electrolysis, but that in practice they removed all old amalgams before placing a gold restoration because of the likelihood of caries under an old amalgam and apparently not because of any fear of electrolysis.

From my own observation in removing gold restorations which had been placed over amalgams I would say definitely that electrolysis had occurred in many cases as evidenced by the presence of a black, powdery residue where cement should have been and a discolouration of the gold opposite those areas. The discoloured areas were noticed particularly where the gold and amalgam were separated by a thin film of cement only. On the other hand old "Shell" crowns which usually "fitted where they touched" or in other words had a thick layer of cement showed no signs of electrolysis but the usual wash-out of cement due to poor gingival adaptation.

Dental schools with access to research facilities should settle this question once and for all.

We know that electrolysis cannot take place without solution and in cases where both the gold and amalgam are exposed to saliva this would act as the solution. In the other cases where gold alone is exposed it is conceivable that free acid in a thin mix of cement could and would act as the solution.

Some authorities on mouth cancer condemn the use of dissimilar metals in the same mouth because of electrolysis and resultant "Slow Burn."

To sum up my own procedure is:

1. Remove all old amalgam before placing an inlay.

2. Where amalgam is used to build up a tooth in preparation for a ¾ or full crown relieve the gold or better the wax pattern, sufficiently to give as thick a layer of cement as possible opposite the amalgam portion of the restoration. — *John Gansner, Vancouver, B.C.*

•

Reply from Alberta

1. Galvanic action can only take place when two different metals are in contact, or are separated, and are in the presence of an electrolyte. When metals have polished surfaces and are in contact and surrounded by an electrolyte the cell thus formed has more potential or is more active.

2. Generally there is a film or layer of cement separating the gold and amalgam thus preventing the formation of an efficient galvanic cell, if one is formed at all. It is admitted that in theory the cement could be considered an electrolyte.

3. The inlay may have been a failure due to various original conditions, e.g. imperfect casting, faulty preparation, improper cementation.

4. The underlying amalgam may have been placed over carious dentine, or the operator may assume that the dentine is healthy under an amalgam either placed or not placed by him some time prior to the preparation for the inlay. Roentgenograms are not sufficient proof in these instances.

If the amalgam is newly placed over healthy dentine in a well prepared cavity, I believe a properly constructed inlay can be placed over it and can be expected to give normal service.

In my opinion, it is doubtful if a gold inlay placed in a tooth which has previously been partially restored by an amalgam fails more readily because of that amalgam.—*H. R. MacLean, Edmonton.*

•

Reply from Manitoba

Re the failure of gold restorations cemented to amalgam fillings: There may be galvanic action sometimes but I believe more often it is a chemical action on the amalgam and sometimes on the gold, (especially a low carat gold) by the free acid of the cement, that causes failure. The amount of action will presumably depend upon the thinness of the cement mix as well as how the powder is incorporated into the acid.

The balancing of the amalgam as well as of the gold alloy would also influence the amount of oxide formed, as would the dryness of the cavity and the absence of saliva and film of debris in the cavity. This is a matter properly in the field of research at one of our dental schools.—*H. J. Merkeley, Winnipeg, Man.*

•

Reply from Ontario

Factors involved are: (1) Diffusion, (2) Electro-galvanism. *Diffusion*: If a block of lead or silver amalgam is in close contact, the gold will ultimately become contaminated through the slow diffusion of the lead or silver amalgam into the gold which becomes brittle and discoloured. This condition results even where no pressure is applied to the two metals—contact alone is sufficient.

Electro-galvanism: If two dissimilar metals are placed in a suitable electrolyte there will take place, according to the fundamental law of electro-physics, "a disturbance in their equilibrium and a dissociation of their elemental electrons. The electrons of a higher or electro-positive position in the electromotive series of metals flow towards and replace or repose upon those of a lower or electro-negative position." Example: A gold inlay cast against a post of stainless steel: Inlay becomes detached because of the corrosion occasioned by electro-galvanism.

Clinical Application:

(1) If the gold inlay is in immediate contact with remnants of the amalgam, there will be a slow diffusion of the amalgam into the gold, causing disintegration of the precious metal.

(2) If the gold inlay is cemented to place, then the cement acts as an efficient electrolyte and electro-galvanism comes into play, resulting in the disintegration of the metals concerned and, possibly, injury to the dental pulp.

Remedy:

Before cementing the inlay, (1) place a protecting layer of varnish over all cavity surfaces, or (2) line the cavity with a layer of cement and let it set for a few days before cementing the inlay. This will greatly reduce the effect of the cement acting as an electrolyte.—*Thomas Cowling, Toronto.*

•

Reply from Ontario

After receiving the letter containing the problem, it was submitted to the Noon-day Study Club of the London Dental Society. The consensus of opinion of the above group was that other contributing factors, such as caries under the amalgam which probably caused the original failure, and faulty inlay margins

were more likely to be the reason of the failure than any action between the amalgam and the gold.

I have on many occasions removed gold shell crowns that have been in place for years with the cement still intact and when removed have found amalgam under the cement.

In making any restoration it is of course necessary to remove all old filling materials to make sure that no caries is present unless one is absolutely sure that the condition is satisfactory. We are often astounded at what we find under old amalgam fillings which have been improperly inserted. The use of gold in such circumstances is inviting failure.

In my opinion, from observation, but certainly not from scientific knowledge, it is permissible practice to use amalgam where it is necessary to build up badly broken teeth before making a gold restoration.—*E. W. Fuller, London.*

•

Reply from Quebec

I am in entire agreement with the late Dr. Tinker and Dr. Edgecombe in connection with cementing a gold restoration in a cavity which has had a silver amalgam filling, part of which has been left in the tooth. On many occasions I have discovered loose and leaking inlays put in over old amalgam. Examination shows little or no cement remains in the cavity or on the inlay which suggests some action taking place between the two metals. Many men are replacing broken down amalgam fillings with gold inlays: it should be a cardinal rule that all amalgam is removed before the inlay is cemented. In some cases for speed and convenience the amalgam can be left in the base of the cavity while the impression is being taken but it should always be completely removed before the inlay is cemented.—*Winston C. Bushell, Montreal, Quebec.*

•

Reply from Nova Scotia

In discussing the problem presented by Dr. Edgecombe it seems a pity that a more detailed description was not given of the way the inlays referred to failed, the failure of which was attributed solely to "galvanic action which disintegrated the acid cement."

My own experience has been that in the majority of failures of well seated inlays failure has occurred through a recurrence of caries at the gingival margin.

When such failures occur, while not disputing Dr. Edgecombe's claim of galvanic action being responsible I feel it would be difficult to prove that such was the sole reason. Other factors should be considered, particularly, neglect to correctly prepare a bevel at the gingival, which would enable one to secure a close fitting lap joint. Also if the original silver extended gingivally below the inlay, recurrence of caries at that point might be the cause. Many other factors which lead to failure might be mentioned but it would be interesting to have a further description of the nature of the failures encountered by Dr. Edgecombe.—*Warren C. Oxner, Halifax, N.S.*

ANNOUNCEMENT

Chicago Dental Society

The eighty-fifth Midwinter Meeting of the Chicago Dental Society will be held February 6-9, 1950 at the Stevens Hotel, Chicago.

A full program of essays, limited attendance clinics, table clinics and motion pictures will be presented.

Iodine Abstracts and Reviews

A new bi-monthly periodical, Iodine Abstracts and Reviews, is being prepared by the Iodine Fellowship at Mellon Institute, Pittsburgh 13, Pa., to provide summaries of scientific and technical literature relating to the uses of iodine and its compounds in chemistry and in the industries. From time to time there will be presented reviews of specific phases of the science and technology of iodine.

Complimentary subscriptions may be secured by addressing the Iodine Educational Bureau, Inc., 120 Broadway, New York 5, N.Y.

The Forum

THE INFLUENCE OF GENERAL HEALTH SUPERVISION ON THE FREQUENCY OF DENTAL CARIES IN GROUPS OF NORWEGIAN CHILDREN

by GUTTORM TOVERUD, Ph.D., Professor of Pedodontia, Dental School of Norway, Oslo.

Condensed from paper in Br. D. Jour., April 14, 1949.

It has been demonstrated that a health supervision of mother and child at a special health centre has led to a decrease in caries frequency during pre-school age.

It appears that the increased dental health of children attending these health stations may be ascribed to a combination of factors: a good resistance laid down during the pre- and post-eruptive mineralization periods and a reduced dental plaque of refined carbohydrates.

This conclusion seems to be in agreement with the result of other caries studies in Norway during the last few years.

In a home for diabetic children in Oslo it has been shown that in children with even the most acute and widespread caries picture when diabetes starts, after having been put on insulin and restricted sugar diet with plenty of protective foods, the caries process usually stops and new cavities may not develop for years (Toverud, Kjosnes and Toverud). These children cannot be classed as orphanage children as they do not stay in the home for more than three to four weeks twice a year. Those children, however, who do not stick to the strict diet but live chiefly on the so-called free diabetic diet, show a caries picture the same as that of the average non-diabetic child living in a private home. The cause of the improved dental condition of the children living on the restricted diabetic diet may be found in the following three facts: regular meals without any between-meal eating of refined carbohydrates —plenty of protective food—no sugar, or sugar products.

In careful studies before the war of 260 children of three to six years of age together with case histories, including those of their mothers, the lowest caries picture was found in the group of children having had the best calcifying condition from early foetal life and, later on, in combination with a low intake of refined carbohydrates. A liberal amount of protective foods —including cod-liver oil, except during the summer-time—did not seem to counteract the high intake of sugar and sweets (Toverud, 1948).

The remarkable decrease in caries frequency in childhood in Norway during the war seems to be best explained on the basis of a reduced intake of refined carbohydrates and a more regular intake of protective foods. These have resulted in better resistance of the teeth and a reduction of the dental plaque of easily fermentable carbohydrates. Different neutralizing factors of the saliva may also have been influenced in a positive way (Toverud, 1946 and 1949).

When the systematic health work for mother and child has not been more successful in depressing the caries percentage as a whole in the preschool age its comparative failure must be ascribed to lack of co-operation from the clientele. We have the feeling that the mothers and children are keener on the protective foods than they are on restriction of the refined and sticky carbohydrates. In

such health work, therefore, more attention must be paid to this last factor. But how can we attack this factor in practical life? During the war we all were forced to reduce our consumption of sugar and other easily fermented carbohydrates. In peacetime people do not like forced restrictions, and voluntary restrictions can be expected only to a limited extent.

In this respect it is of the greatest interest to follow the work which is now going on with fluorine, either in drinking water or as a topical application. If the addition of fluorine water should lead to a considerable reduction of the caries frequency and not do any harm to the organism as a whole, nor to the teeth later in life, this prophylactic measure seems to be the cheapest one.

The experiments on the different anti-amylases and anti-glucocidases will also be followed with the greatest interest. We know that such antifactors can prevent the formation of acids in the laboratory but we seem to be far away from putting the knowledge into practice.

RHEUMATIC DISEASE

by R. G. RATZ, M.B., Ottawa, Ont.

Condensed from Canad. M. A. Jour., May, 1949

A survey of 25,000 households across Canada, including 60/70,000 persons over 14 years of age, was made by the sampling unit of the Dominion Bureau of Statistics in November, 1947. A preliminary estimate of the results of this survey indicates that in the month of October, 1947, 22.6% of an estimated seven million days lost on account of all illnesses were ascribed to arthritis or other rheumatic disease. It is further estimated that about 7% of the total adult population of Canada of fourteen years of age and over are afflicted with arthritis or rheumatism in some form.

Paramount in treatment is the importance of adequate rest. It is surprising what can be accomplished in economy of energy and relief from trauma to inflamed joints by a judicious rearrangement of normal routine. For the acutely ill patient complete bed rest may be essential. Chronic arthritics should be advised to spend half their time in bed.

Almost all, if not all physiotherapeutic measures useful in arthritis can be provided in the average home at very small expense. Warm aqueous or paraffin baths, which are so soothing and restful to stiff and aching joints and spastic muscles, coupled with a few simple daily exercises, outweigh in value much of the complicated electrothermal equipment upon which the patient gazes with awe and vain hope.

Closely allied to the importance of physiotherapy is that of occupational therapy. Here again well-trained therapeutists are usually available with a wide range of activities well within the patient's physical capacity.

Most arthritics are somewhat undernourished and haemoglobin levels are apt to be low. Some attention to diet and supplementary supply of vitamins may be indicated. Great care should be exercised, however, to avoid having the patient attach an undue degree of importance to such general measures and thereby encourage his indulgence in any one of the many dietary "fads" or, worse still, contribute substantially to the financial support of the unscrupulous purveyors of vitamin "curealls."

Removal of the "foci of infection" which are grossly obvious may result in some improvement in general health. This approach must also be made with caution and without the offer of too much hope of immediate cure. I am certain that in many cases the prescription of two weeks' rest in bed would give equally beneficial results to those obtained by a tonsillectomy, wholesale tooth extraction or removal of a suspected gallbladder.

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Editorial

AN INTERESTING PROBLEM

Einstein in his introduction to Lincoln Barnett's "The Universe and Dr. Einstein" states "the growth of our factual knowledge together with the striving for a unified theoretical conception comprising all empirical data, has led to the present situation which is characterized—notwithstanding all successes—by an uncertainty concerning the choice of the basic theoretical concepts."

As dentists we may know nothing about this relativity business in the field of physics and may look starry-eyed at the thought of it but I am wondering if in the practice of dentistry our factual knowledge is what it should be and whether or not our "basic theoretical concepts" should be revised and standardized.

In this issue of the Journal in the "Problems in Practice Section" Dr. Edgecombe presents what would appear to be a simple problem in everyday practice, that is whether or not it is harmful to leave old amalgam under a gold inlay. He quotes the late renowned Dr. Edward T. Tinker as stating that it is harmful, that a galvanic action takes place which disintegrates the acid cement and so he attributes the failure of certain inlays to this possible cause and enquires as to whether others have had similar experiences.

This problem was presented to seven of our leading Canadian dentists and the replies are most interesting. Three agree with the galvanic action theory, three disagree and one admits it may happen so we end where we started in trying to solve what would seem to be a simple dental problem. It is obvious that some real research should be done in this matter because if the galvanic theory is true then all dentists should be urged, for this reason,

to remove all old amalgam before inserting a gold restoration, which would affect the practice of a large number of our men.

There are some statements in these replies to which we can all subscribe. All old amalgam should be removed where there is any question of the condition underneath the amalgam and, obviously, every care should be taken in cavity preparation, casting, cementing etc.

Not from a theoretical standpoint but from clinical experience over many years this writer votes with those who say No to the galvanic theory as being of practical importance. Over the years it has been our practice to build up broken down teeth with amalgam before building the gold restoration as we much prefer a large body of amalgam under our restorations than a large body of cement. In the case of caries developing near some margin the caries stops in contact with amalgam while a large body of cement disintegrates rapidly under these conditions and the tooth may be lost. Where inlays have not stood up, a condition which happens but rarely, it has not been difficult to decide on the cause of failure.

This problem was brought forcibly to our attention a while ago when a dentist in a distant city left the impression with one of our patients, perhaps inadvertently, that it was nothing short of criminal negligence to leave a piece of amalgam under a gold inlay.

This is just one of many unsolved problems in the every day practice of dentistry the solution of which would mean so much more to the practising dentist than many of the more complicated and less practical projects which are being undertaken by our research workers in these days. Our "basic theoretical concepts" require revision. M.H.G.

BOOK REVIEW

DR. J. MENZIES CAMPBELL

A Dental Bibliography, British and American, 1682-1880 with an index of authors. Compiled by J. Menzies Campbell, F.R.S.E., D.D.S., L.D.S., Glasgow, Scotland. Published 1949 by David Low, 15 Cecil Court, Charing Cross Road, London, W.C.2.

This book details 723 British and American books and pamphlets published up to 1880. The author has done very extensive research in compiling this book and has produced a very valuable addition to dental literature.

This bibliography should prove of service to universities, dental schools, librarians, and collectors, besides as the author says stimulate interest in an intriguing subject. M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

No. 9 Army Dental Stores located at Toronto, Ontario, has recently been activated as an active unit of the Canadian Army, Reserve Force. Captain R. C. Cullington, E.D., of Toronto has been appointed Officer Commanding.

Captain R. C. Cullington is a member of the staff of The Dominion Dental Company of Canada, Toronto, Ontario. He was appointed to the Canadian Dental Corps as Lieutenant (Quartermaster) at Toronto. He was promoted to Captain (QM) 11 December, 1939 on posting to 1st Division Dental Company and proceeded Overseas. He served in the United Kingdom with No. 1 Dental Company, 11 Base Dental Company and Canadian Depot of Dental Stores and was awarded a Mention in Dispatches. He returned to Canada in August 1946 and returned to his civilian occupation in September, 1946.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

Unemployment Insurance

"Whenever the contractual rate of remuneration is an hourly rate, a daily rate, a piece rate, a mileage rate, or other rate being a sum of money per unit of physical measurement of work accomplished or service rendered, or any of such rates in combination with other rates, the employee is insurable regardless of his earnings.

Whenever the contractual rate is other than that cited above, and in addition, under the contract the employee earns more than $3120 per year he or she is not insurable."

Inquiries have been received respecting different arrangements for employees in the dental office. In answer the above ruling has been obtained from the Unemployment Insurance authorities and applies to any employee in the dental office, including a graduate dentist.

Notes on the Workings of the British Scheme

1. *Prevention*—the operation of the plan during the first year has resulted in a marked lessening of dental services for children. Some 15 to 20 per cent of dentists formerly employed in the established school dental service have resigned. Very little provision (estimated $10,000) has been made for dental research in the scheme.
2. *Disputes re Salaries*—during the discussions preceding the adoption of the legislation much was said regarding the basis of settling disputes respecting payment for services. It was understood that all discussions would be between the representatives of the profession and the representatives of the Ministry of Health. Two points in this regard have developed:
   (a) The Penman Committee was set up by the Government to study the matter of proper payments for all operations in the dental chair. As reported in the last Governors' Letter, the Minister, not waiting for the Committee to report, drastically reduced dental fees.
   (b) A ruling has now been laid down that disputes re salaries, etc., to members of health professions are to be referred to the Minister of Labour who *may* appoint a Board of Conciliation.

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Alberta Plan For Welfare Recipients

The plan for dental services for welfare recipients, in Alberta, has now been in operation for over two years. Under this plan the Government makes payment monthly to the Alberta Dental Association on a per capita basis for each recipient. The Association in turn makes payment to dentists of the province on a fee schedule basis. As far as is known this is the only plan of this nature for dental services in operation. At least one other province has a similar proposal. The plan has worked to the satisfaction of both the Government and the profession. For details of operation, see Dental Treatment Plan for Pensioners, Journal Canadian Dental Association, July 1948 issue.

The Canadian Dental Association has gone on record as favouring this type of operation for any government plan in financing treat-

Alberta Plan for Welfare Recipients

Figures ending May 31, 1949

	Authorized	*Completed*
Total Amount	$99,411.50	$87,155.50
Number of Extractions	12,784	10,854
Number of Amalgam Fillings	9,168	7,876
Number of Silicate Fillings	1,580	1,400
Number of Gold Restorations	106	95
Number of Denture Repairs	757	735
Number of Periodontia Treatments	314	287
Number of Vincent's Treatments	19	16
Number of X-rays	1,236	977
Number of Prophylaxis	869	762
Number of Examinations	504	408
Number of Miscellaneous Items	278	226
Number of Relines	355	353
Number of Partial Dentures	184	179
Number of Bridges	12	12
Number of Complete Dentures	1,736	1,447
Number of cancelled cases due to the patient not taking advantage of the authorization		117
Amount of the same		$2,435.00

The following figures represent the number of pensioners eligible for treatment as at May 31, 1949

	Number	*Spouses*	*Dependents*	*Total*
Old Age Pensioners	15,009	2,106	201	17,316
Blind Pensioners	425	117	97	639
Mothers' Allowance Pensioners	1,386		3,331	4,717
Total	16,820	2,223	3,629	22,672

The following figures show the percentages in each group that took advantage of the free dental services during the two year period ending May 31, 1949

	Took Advantage
Old Age Pensioners	16%
Old Age Pensioners Dependents	20%
Mothers' Allowance Pensioners	55%
Mothers' Allowance Dependents	51%
Blind Pensioners	25%
Blind Pensioners Dependents	40%
All Groups Combined	24%

Summary of Operations for the Two-year Period Ending May 31, 1949

	No.	*Amount*	*Average cost per case*
Old Age Pensioners (based on work completed)	2,255	$35,572,00	$15.77
Dependents of Old Age Pensioners	386	7,405.00	19.18
Mothers' Allowance Pensioners	751	16,686.00	22.22
Dependents of Mothers' Allowance Pensioners	1,691	24,764.00	14.64
Blind Pensioners	90	1,573.50	17.48
Dependents of Blind Pensioners	69	1,155.00	16.74

Total Number of Completed Cases of All Types	5,242
Total Cost of All Types of Completed Cases	$87,155.50
Average Cost Per Case Overall	$16.63
Cost of Administration for Two Years	$8,100.47
Administration Cost Per Case (based on the number of cases authorized, 5,710)	$1.42
Dental Operators Cost Per Case	$16.63
Total Cost Per Case	$18.05

TABLE I

ment services. At the recent Annual Meeting of the Board of Governors at Saskatoon, the following resolution was adopted:

"WHEREAS the first duty of a provincial dental legal body is to protect the public and ensure a satisfactory dental health service, and WHEREAS the provincial dental legal body has disciplinary powers, and WHEREAS the profession has demonstrated its ability to administer a dental service, and WHEREAS in our opinion, a dental health service can be administered more efficiently

and economically by the profession, THEREFORE be it resolved that this Committee recommends to the Board of Governors that in any government sponsored plan for dental health care, the method of payment be on a per capita basis from the government payable to the dental legal body of each province, who shall administer these funds to provide a basic dental health maintenance service."

Figures are now released for the two completed years of operation ending May 31, 1949, as in table 1.

NEWS FROM THE PROVINCES

ONTARIO

Ontario Dental Curlers

During the Ontario Dental Association Convention last May a group of Curling enthusiasts had a meeting and plans were made for a Dental Bonspeil to be held at the Brampton Curling Rink on December 12 next.

Dr. R. J. Hiscox is chairman of the committee on arrangements and associated with him are Drs. Harold Campbell, A. M. Hord and Mr. C. A. McKenna.

The curling rink will accommodate 16 rinks. The fee for each rink will be $14.00 which includes dinner and prize money. Each rink is guaranteed 3 games and each rink must include at least 3 dentists.

Further information can be obtained from Mr. C. A. McKenna, S. S. White Co., College Street, Toronto, Ontario.

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ALBERTA

August Golf Game

Thirty-eight members of the Edmonton and District Dental Society turned out at the Elk Island Park on August 4 for the regular golf contest. Following dinner prizes were presented to the following: Bob Plaquiere, Tom Nickiforuk, Clarence Eastwood, Harold Knight, George Decker, Bill Weber, Fred Graham, Earl Pinch and Arthur Kirk.

Dr. Harold Knight presided over the festivities.

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BRITISH COLUMBIA

The Victoria Dental Assistants' Association

This Association entertained Mrs. Marion Edwards, the National President, at a social meeting on June 23. Mrs. Edwards presented a résumé of the work of the National Association emphasizing its significance to the local group. All agreed that her visit was far too short.

The fall program will get under way in September under guidance of the president, Mrs. Margaret Sherwin.

EMPIRE NEWS

GREAT BRITAIN

British Society of Periodontology

A Society has recently been formed in Great Britain for the purpose of promoting the study of Periodontology. It is felt that this Society, of which Dr. E. W. Fish has been elected the first President, will provide the means for those interested to meet, hear papers upon the subject and discuss their problems.

The Society will meet during the winter months and papers, communications or demonstrations will be presented. The initial membership is about forty.

Correspondence may be addressed to the Hon. Secretary at the Institute of Dental Surgery, Eastman Dental Clinic, Gray's Inn Road, London, W.C.1.

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Dental Estimates

The average number of dental estimates for treatment and appliances received daily during the past four weeks, Mr. Bevan told the House of Commons on May 26th, was 28,000.—D. Mag. and Oral Topics.

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Hull Dentists Say "No New Health Service Cases"

Hull dentists, at a meeting on May 23rd, decided to refuse to accept any new cases under

the National Health Service as from June 1st.

A statement issued after the meeting said that the dentists could not accept "the arbitrary cut in fees proposed by the Minister of Health, nor accept new cases until representatives of the profession had met the Minister.

"The meeting," it was stated, "feels very strongly about the Minister's dictatorial action in imposing this cut in fees without waiting for the report of the Penman Fact-Finding Committee, which he himself set up, and in which the dental profession is participating."

Another Refusal—Fourteen dentists in the Dudley, Worcs., area are refusing, as from June 1st, to accept National Health Service patients. They stated that an emergency service would be maintained, and that treatment would be free for people genuinely unable to afford it. In other cases a charge would be made.—D. Mag. and Oral Topics.

GENERAL NEWS

Dominion Dental Council Examination Results

Following is a list of the names of the successful candidates at the examination held in June, 1949 and the number of the certificates granted each.

Name	*Home address*	*Certificate Number*
Anderson, Donald Lorne	Orillia, Ontario	1598
Burgman, George Edward	Melville, Saskatchewan	1599
Egan, William George	Sydney Mines, N.S.	1600
Gelfant, Harry Laurie	Winnipeg, Manitoba	1601
Goodine, George Raymond	Fredericton, N.B.	1602
Shuckett, Morley R.	Winnipeg, Manitoba	1603
Urban, Albin Stanislaus	Calgary, Alberta	1604
Wood, Harris Solomon	Edmonton, Alberta	1605
Colson, Edward Logan	Winnipeg, Manitoba	1606
Frankel, Arthur Harry	Winnipeg, Manitoba	1607
Kahane, Leonard Herman	Winnipeg, Manitoba	1608
Lipman, Daniel	Toronto, Ontario	1609
Charman, Frank Danell	Truro, N.S.	1610
Comeau, Joseph Julius	Saulnierville, Digby Co., N.S.	1611
Elo, James Thomas	Toronto, Ontario	1612
Lane, Arnold H.	Montague, P.E.I.	1613
Ramsay, Allan R.	Neepawa, Manitoba	1614
Senecal, J. H. A.	Rosetown, Saskatchewan	1615
Young, James H.	Ottawa, Ontario	1616
King, Wilson Charles	Halifax, N.S.	1617
Macneil, Wm. Hamilton	Halifax, N.S.	1618
Whyte, Eric James	Sydney Mines, N.S.	1619
Batiuk, Walter	Edmonton, Alberta	1620
Boyce, Murray Simpson	Edmonton, Alberta	1621
Harrison, Lorin Francis	Jasper, Alberta	1622
Large, Harley John	Yorkton, Saskatchewan	1623
McNichol, Chalmers Taylor	High River, Alberta	1624
Sills, Royal Cleveland	Landis, Saskatchewan	1625
Soloway, Lawrence	Winnipeg, Manitoba	1626
Strelioff, Mac George	Canora, Saskatchewan	1627
Windsor, Charles Leslie	Kerrobert, Saskatchewan	1628
Parker, Douglas Morton	Regina, Saskatchewan	1629
McCavour, John Curry	Ottawa, Ontario	1630

A. J. Brett, *Secretary*

A.D.A. Membership Reaches 73,074

Total membership in the A.D.A. increased nearly 1,500 during June to a new all-time high of 73,074. During the month, active membership increased from a total of 62,136 to 63,768, a gain of 1,357.

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Fédération Dentaire Internationale

XXXVIIth Annual Session of the F.D.I. —Milan 1949.

The 37th Annual Session of the Fédération Dentaire Internationale took place in Milan from May 30 to June 4, 1949, under the chairmanship of Dr. Ch. F. L. Nord, President of the F.D.I. and Prof. S. Palazzi, Milan, Chairman of the Italian local Committee.

The following countries were officially represented: Argentina, Belgium, Denmark, Finland, France, Great Britain, Greece, Holland, Italy, Luxemburg, Norway, Philippines, Spain, Sweden, Switzerland, Turkey and the United States of America.

The Federation was also honoured by the presence at the Session of two Representatives of the British Government: Dr. W. Senior, O.B.E., L.D.S., Senior Dental Officer Ministry of Health and Air Commodore Ballantyne, C.B.E., D.F.C., F.D.S.R.C.S., K.H.D.S., Director of the Royal Air Force Dental Services.

Some seventy Delegates and Commission Members took part in the various activities, which included meetings of the Commissions of Hygiene, Public Dental Service, Education, Legislation, Publication, Scientific Research and Terminology. The Executive Council also held two meetings.

The program included a scientific meeting patronized by the Commissions of Hygiene, Education and Public Dental Service. The themes submitted for discussion were the following:

1) A survey of the present effort for the prevention of dental diseases.

2) The tendencies of Dental Education.

3) Dental treatment of the Adult under the National Health Service.

These subjects were introduced by Dr. Boyes, Prof. Bradlaw and Dr. Senior. Most interesting discussions took place, which in spite of the up to date character of the themes were carried out in an atmosphere of perfect courtesy.

An outstanding event took place during this Session: The Affiliation to the Federation of the "Association des Médecins-Dentistes Italiens." This affiliation is the best demonstration of the aims and tendencies of the F.D.I., whose foremost purpose is to be international and which in a thorough spirit of collaboration and mutual understanding invites representatives from all professional doctrines to take part in its activities.

Among the resolutions of the Commissions, the following were the most important:

1—The signing of the contract concerning the publication of the new International Dental Journal, which will be edited by a special Committee under the chairmanship of Prof. H. Stones of Liverpool, Great Britain.

2—The Hygiene Commission, whose main subject had been the existing relationship between the F.D.I., the World Health Organization and U.N.E.C. proposed a scientific and precise definition of what is generally called "Dentistry": Dentistry is the Health Service specifically concerned with the establishment, maintenance, restoration and improvement of the health, function and appearance of the oral cavity and its associated parts in their relationship as a whole.

This includes the recognition of the oral signs of systemic diseases, the prevention and treatment of oral diseases, injuries, malformations and deficiencies; the repair of teeth when damaged by accident or disease, and their replacement when lost.

The Field of Dentistry, then, is comparable with the Field of Opthalmology, Laryngology, Otology and Dermatology, and its social importance and opportunities are at least as great.

It is, therefore, reasonable to define Dentistry as "Odonto-Stomatology, Branch of Medicine."

Resolution No. 2—The Hygiene Commission recommends that an oral health program be instituted for all dental students on similar principles to those already existing in many dental schools. This consists of dental prophylaxis throughout the whole of the students' career and requires a satisfactory state of oral health and function before a student can be recommended for a dental diploma or degree.

It is further recommended that a similar discipline for general health be instituted and it is suggested that these recommendations be submitted to the directors of medical and nursing schools for their consideration.

Resolution No. 3—The Hygiene Commission recommends that an international nomenclature of terms used in the profession of dentistry be compiled. The Commission considers that the presentation of these terms in the form of a dictionary in the main languages would best serve this purpose.

3—The Public Dental Service Commission submitted the two following resolutions:

a) The Dental Health of the people of any nation can only be secured by the application of scientific measures of prevention and control of dental disease in children.

b) That widespread treatment programs for the adult population of any nation should only be instituted after proper provision has been made for the adequate dental care of the child population.

4—The Education Commission proposed the following resolution:

The F.D.I. is convinced that since the standard of world dentistry is dependent upon the educational program, it should be founded on high professional ideals and sound scientific principles uncompromised by expediency.

The Commission of Education accepts the definition of Dentistry proposed by the Commission of Oral Hygiene.

5—Finally, the Bureau in order to stress the importance the Federation gives to the defence of the legal practice of the Profession, especially owing to the extension of social organizations, submitted to the Executive Council, who unanimously approved it, the following resolution:

"The field of Odonto-Stomatology includes all chairside operations related to the making, fitting and repairing of prosthetic appliances, which is an integral part of the functions of legally qualified dental practitioners to whom alone, in the interest of public health, this work should be entrusted."

As tradition demands, the activities of the Session were coupled with the various receptions and entertainments. First came the informal reception given by the Bureau of the F.D.I. During the week we were the guests of the Municipality of Milan and of the Rector of the University. On another we set off on an excursion to Pavia, where we visited the historical settings of the University. The Session closed with the Banquet presided over by Dr. Nord and honoured by the presence of officials of the city of Milan and by the Rectors of the Universities of Milan and Pavia.

On Sunday, June 5, a scientific meeting, not included in the Session but patronized by the Federation, took place during which the Italian Colleagues were able to listen to several foreign lecturers.

The French National Committee has invited the F.D.I. to hold its Annual Session in 1950 in Paris, some time in July. This Session will be an outstanding event as it will celebrate the F.D.I.'s fiftieth birthday.

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Danegeld

Go to England and get new teeth for nothing.—Advertisement in Lollands Tidende, Denmark.

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Nigeria

Nigeria (population 23 million) has only three private dentists. — D. Mag. and Oral Topics.

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The Western Canada Dental Nurses' & Assistants' Association

This Association held its fifth biennial meeting on June 5, 6, 7 and 8 at the Bessborough Hotel in Saskatoon. The meeting was well attended and was a success both educationally and socially. Eleanor Dix, President, of Calgary, presided jointly with Marion McComb, President of the Saskatoon Dental Assistants.

Marion McComb gave an address of welcome on Monday morning, following the opening by Dr. W. Waite of Saskatoon.

Eleanor Dix, President, said in her address that she hoped this meeting would help everyone to better cope with daily difficulties upon the return to their offices.

Mary McArthur, Honorary President, from Winnipeg, mentioned in her address that the Western Canada Dental Nurses' and Assistants' Association had been inaugurated in Saskatoon in 1937. She welcomed Marion Edwards, Toronto, the Canadian Association President, and all the delegates.

Greetings were extended from their associations by the following delegates: Marion Edwards from Toronto, Margaret Goode and Florence Limoges from Montreal, Grace Lambert from Vancouver, Kay Hoffard and Margaret Kitching from Winnipeg, Jean Rogers from Edmonton, Helen Forbes from Regina and Madeliene Rogers from Calgary.

At the business meeting which followed, the following slate of officers were elected for the years 1949-51.

Honorary President—Mary McArthur, Winnipeg.
President—Kay Hoffard, Winnipeg.
Vice-President—Penny Waite, Saskatoon.
Secretary—Margaret Kitching, Winnipeg.
Treasurer—Ethel Brown, Winnipeg.

Following the business meeting, the members were guests of the Ash-Temple Co. at a luncheon in the Bessborough Hotel, when the guest speaker was the Rev. D. Wilkie, of Saskatoon.

In the afternoon, Marion Edwards gave an inspiring address on "Friendship," following which several really wonderful and worthwhile table clinics were put on by several girls.

On Monday evening the Saskatoon Dental Assistants were hostesses at an "After Nine Party." This was an enjoyable affair.

Tuesday morning Dr. H. R. McLean spoke on "The Dental Nurse in Relation to Conservative Dentistry." This was very interesting and much appreciated by everyone.

Denco Western Co. were hosts to the girls at a luncheon, with Mr. McKenna, managing director of the S. S. White Co. as the guest speaker. Mr. McKenna added much to the enjoyment by his sincerity and humour.

During the afternoon session Dr. W. G. McIntosh of Toronto spoke. He discussed "Periodontal Diseases and Their Treatment," which was made very interesting by the use of coloured slides.

Mary Brett of Regina, graduate dental hygienist of the University of Minnesota, then spoke on the course she had taken at the University of Minnesota.

The highlight of the convention was "The President's Dinner and Dance" on Tuesday evening when all the girls were the guests of the Western Canada Dental Association.

On Wednesday morning a breakfast party sponsored by the Mid-West Dental Supply Co. was held in the diningroom of The Bessborough Hotel. Each girl received a lovely corsage.

During the morning session, Mr. Tobey, from the L. D. Caulk Co. gave a very detailed analysis on "Amalgams" and touched briefly on "Silicates."

At an impressive candlelight ceremony, the newly elected officers of "The Western Canada Nurses' and Assistants' Association" for the term 1949-51, were installed. Marion Edwards was the installing officer with Gynelle Anderson assisting as conducting officer, and Mary McArthur, honorary president and Eleanor Dix, immediate past president, representing the "Past Presidents."

The meeting was taken over by the new President Kay Hoffard, who spoke a few words before the adjournment.

MARGARET KITCHING, Secretary.

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Council on Dental Education Reviews Federal Aid Proposals — Checks Suggested Definition of Role of Dental Hygienists

Federal aid to education and the establishment of educational requirements for dental hygienists were among major proposals considered by the A.D.A. Council on Dental Education at its annual meeting here early this month. Council members reviewed a resolution adopted earlier by the American Association of Dental Schools which went on record favouring the principle of federal aid to dental education provided schools were not subjected to federal controls. Council members also took under consideration an advisory recommendation defining the function of dental hygienists which was prepared by a group of some 80 dental educators, dental hygienists and others who attended an A.D.A. sponsored Conference on Dental Hygienists' Training held in Chicago, June 30 and July 1. Participating in the conference were representatives of the American Dental Hygienists' Association, U.S. Public Health Service, American Association of Dental Examiners, and various A.D.A. agencies. The advisory definition of the functions of dental hygienists, proposed as a basis for inspection and accreditation of dental hygiene schools, covered three major areas: "(1) The prime function of the dental hygienist is to assist the members of the dental profession in providing oral health care to the public. She may apply her knowledge and skills either in the office of the private practitioner, or in formal health educational activities in schools or other agencies. In either instance, she can and should perform an important function in health education; (2) The intra-oral operations performed by the dental hygienist shall be limited to the natural and restored surfaces of the crowns of the teeth beginning at the

epithelial attachment; in no circumstances shall she attempt to treat pathologic involvments of the crowns of the teeth or of the supporting and adjacent tissues; (3) at the discretion of the dentist, the dental hygienist may be required to perform other important office duties for which her training in the hygienist school may have prepared her." The definition also stated that the present two-year course seemed adequate for the tasks of a dental hygienist in a private dental office. As preparation for working in a school system or other agency, however, the conference recommended that dental hygienists receive additional formal training.

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"Dental Nurses" Plan and Fluoride Program

The A.D.A. Council has authorized preparation of a special report for the board of Trustees and the House of Delegates on various schemes to create a sub-professional group of "dental nurses" to provide limited dental services for children. Dr. Leo J. Schoeny, Council chairman, pointed out that the Council has been opposed to the program known generally as the New Zealand dental nurses plan. The Council met with representatives of the U.S. Public Health Service and reiterated the Association's opposition to permanent continuation of the topical fluoride demonstration program now being carried out in 32 states by the federal government. The A.D.A. has requested that future appropriations for this program be in the form of grants-in-aid to the various states rather than for a federally-operated program.

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Ammoniated Dentifrices

Don't expect too much from your new ammoniated dentifrice as a preventive of tooth decay. It is still in the experimental stage, according to an editorial in the Journal of the American Dental Association.

Many of the claims now being made for the new dentifrices are not warranted by present scientific evidence, the Journal editorial stated.

"Whether ammoniated dentifrices will prove as effective in sweeping away caries (decay) as their advertisers have been in sweeping the country with glowing claims, time alone will tell.

"Meanwhile the public will have the privilege of being guinea pigs, the dentist will be extremely cautious in his recommendations and the purchaser will brush his teeth with tongue in cheek if such is physically possible."

The Journal said that while preliminary reports have indicated that the ammoniated preparations may help prevent decay, it will be at least another year or longer before sufficient tests have been carried out to provide a proper evaluation of the new products.

Because the new dentifrices may be effective, at least in part, the Association has not tried to discourage the public from using the ammoniated preparations.

Members of the dental profession, however, are viewing the current large-scale promotion of the new products with mixed emotions, the editorial said.

"The profession, rightfully, will withhold judgment on ammoniated dentifrices until clinical trial and carefully controlled studies have proved their worth."

•

Extra Copies of New Pamphlet on Compulsory Health Insurance Are Now Available at $1.50 Per Hundred

More than a quarter million copies of the new pamphlet, "What Are We Arguing About?" which discusses the basic issues involved in national compulsory health insurance proposals, have been distributed to A.D.A members in recent weeks. The original distribution of the pamphlet, which is being carried out through state and district dental societies, was planned to provide each A.D.A. member with five copies. Additional copies of the pamphlet are now available at $1.50 per hundred and may be obtained upon request to the Order Department, American Dental Association, 222 East Superior St., Chicago 11, Ill.

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Dental Caries

Mankind's most common disease, tooth decay, is a product of our civilization, Dr. Paul E. Boyle, Professor of Oral Histology and Pathology at the University of Pennsylvania School of Dentistry, reported in the August issue of the Journal of the American Dental Association.

There is an overwhelming amount of evidence indicating a marked increase in dental caries following contact of primitive peoples with civilization.

Civilized man's heavy consumption of car-

bohydrates, particularly sugars, is generally believed to be the major factor in the cause of tooth decay, Dr. Boyle asserted.

He pointed out that reduction of sugars in the diet has been shown to lower the incidence and the rate of progress of caries.

As one means of reducing decay, Dr. Boyle urged universal treatment of the teeth of children with topical application of a sodium fluoride solution. Such treatments, he said, have lowered the incidence of decay by at least 40 per cent.

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Social Costs in U.S.A. 13 Billions a Year

Thirteen billion dollars are spent annually by the American people through public and private agencies for social security, health, correction, welfare and recreation, it was reported June 9 by Community Research Associates, Inc. A non-profit group engaged in social work studies and surveys for agencies and communities, the organization based its findings on statistics and comparisons showing this expenditure to be the sixth largest in the country, exceeded only by the costs of food, clothing, transportation, housing and national defense. —*New York Times* 98:30 June 10, 1949.

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Dental Sufferings of the Great

Washington was fortunate in that his dental sufferings could receive expert attention. David Livingstone was unable to benefit in that way for he was isolated from civilization on his missionary journeys in Africa. Stanley is reported as saying in 1884, "I believe he might have been alive today were it not for his sufferings caused mainly, I believe, by the loss and disease of his teeth." Livingstone died in 1873 at the age of 60.—Br. D. Jour.

Begin Construction of Building for Oklahoma Medical Research Foundation

Construction work was started early this month at Oklahoma City on a three-storey building which will house medical and dental research projects for the Oklahoma Medical Research Foundation. The Foundation was established by a group of leading physicians, dentists and public-spirited citizens. To date, a total of $2,346,342 has been pledged in voluntary contributions towards a goal of $3,000,000. Of this sum, a total of $145,689 has been subscribed by 227 Oklahoma dentists. The building is scheduled to be completed by June 1, 1950. It will include 46,000 square feet of floor space. The new building is being constructed on a site adjacent to the University of Oklahoma School of Medicine.

•

School Dentistry in Ireland

School Dentistry only applies to children attending National Schools, and even then it is very much underserved.

In Cork there are two Dental Surgeons trying to cope with 15,000 children—Dublin is far worse.

When these children leave school and go into employment they must be three years at work before becoming eligible for dental treatment under the National Health Insurance Scheme. This delay in many cases undoes any good that may have been done. Again, a person attaining the age of seventy years is not entitled to dental treatment. All this goes to prove that dental services as at present constituted are not a service in the true sense of the word.—Jour. of Irish D. Assoc.

IN MEMORIAM

Victor D. Crowe of Truro, Nova Scotia, aged 55, died suddenly July 17. A brief announcement of the passing of this prominent dentist appeared in the last issue of the Journal.

Following service in the First Great War he completed his studies at Dalhousie and commenced practice in Truro. For many years he was president of the Colchester County Tuberculosis League. He was an active member of St. John's Anglican Church, and had served as a member of the vestry, as church warden and as synod delegate to the Diocesan Synod of Nova Scotia. He had been also representative to the General Synod of the Church of England in Canada.

He was a member of the Board of Governors of King's College, Halifax. He was a past president of the Kiwanis Club and immediate past president of the Canadian Dental Association. He was a member of Phoenix Lodge No. 50, of the Independent Order of

Odd Fellows and also a member of the Masonic lodge at Truro. At different times he held the singles championship at the Truro Tennis Club. He was a past president of the Truro Golf Club and the Truro Country Club.

Dr. Crowe is survived by his widow, two children and four brothers.

•

Arthur William Ellis of Toronto, Ontario, aged 66, died on July 29 at Toronto Western Hospital after a month's illness.

Dr. Ellis was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1904. On graduation he began to practise in Toronto where he has continued for 45 years. Of late years his office was located in the Toronto Star Building.

Dr. Ellis has had a life long interest in Dental Public Health and in this connection he has held many important posts. He was chairman of the Dental Public Health Committee of the Ontario Dental Association for many years. He was also chairman of the Canadian Dental Hygiene Council for a long period and retired only recently.

In 1935 he was awarded the Coronation Medal in recognition of his services in the field of Public Health and in 1946 he received a further award from the British Dental Association. For many years Dr. Ellis was chairman of the Ontario Government Dental Health Committee; and he was secretary of the International Dental Research Association and represented Canada at meetings in Europe in 1928 and 1929.

He was an honorary life member of the Ontario Dental Association of which organization he was a past president. He was a member of the Independent Order of Foresters, the National Club, the Strollers Club and Yorkminister Baptist Church.

Dr. Ellis is survived by his widow, one daughter and two sons.

George H. Coram of Toronto, Ont., died July 24 after a prolonged illness. He was graduated from University of Toronto in 1903 and practised in the city of Toronto for the last 37 years. Prior to moving to Toronto he practised in Waterton and Drayton. For some years he was on the staff of the Faculty of Dentistry, University of Toronto.

Dr. Coram is survived by two daughters.

•

Frank W. How of Toronto, Ontario, died in July at his summer home on Lake Nipissing from a heart attack. He was a graduate of the University of Toronto and the Chicago Dental College.

He was a past president of the Toronto Anglers' Club. He was also a member of the Rosedale Golf Club, Rotary and the Executive Clubs and formerly of the Granite and Ontario Clubs. He was associated with the Rosedale United Church.

Dr. How is survived by his widow and two brothers.

•

Donald Marion of Nelson, B.C., aged 75, died in July. He was graduated from the Chicago Dental College in 1902 and following graduation practised in Edmonton, Alberta, till 1942 when he retired to Nelson, B.C.

An ardent bowling enthusiast he helped organize the Edmonton Lawn Bowling Club prior to the First Great War and was one of its first presidents.

During his early years in Edmonton he became well known to hundreds of city children taking an active part in coaching lacrosse and junior hockey teams.

Dr. Marion is survived by one son, Dr. Ian Marion of Edmonton and two brothers.

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Mrs. M. McIntyre of Edmonton, Alta., well known among Edmonton church groups for 35 years, died in July.

Our deep sympathy goes out to Dr. McIntyre and the family in their bereavement.

"Count that day lost whose low descending sun
Views from thy hand no worthy action done."

No civilization is complete which does not include the dumb and defenseless of God's creatures within the sphere of charity and mercy.—Queen Victoria.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 15 SEPTEMBRE, 1949 NO 9

LE GRANULOME DENTAIRE

par VINCENT TREMBLAY, B.A., D.D.S., Montréal

1—Histopathologie.

La forme la plus simple de l'inflammation chronique périapicale consiste en la transformation de la membrane péridentaire apicale et de l'os alvéolaire en un tissu de granulation appelé: granulome. Celui-ci peut varier de la grandeur d'une tête d'épingle à 8 à 10 mm., ou même plus, suivant l'intensité et la durée de l'inflammation. C'est le premier changement à la suite de l'infection périapicale chronique, quand la pulpe contient encore un peu de tissu vivant, dans le cas de pulpite chronique. L'examen microscopique des apex révèle une zone d'infiltration de cellules rondes dans la membrane périodentaire. Les cellules inflammatoires sont des polyblastes et surtout des cellules de plasma, indiquant l'inflammation. La zone inflammatoire du bout de la racine est encore trop petite pour être visible radiographiquement. La destruction de la pulpe et son inflammation gagne la racine, la membrane péridentaire et ensuite l'os alvéolaire.

L'apex est entouré par une zone de destruction osseuse bien tranchée et le bout de la racine se projette dans cette zone transparente. Le reste de l'espace péridentaire semble intact. Cette zone entourant la racine est remplie de tissus de granulation. Une légère accumulation de cellules d'exudat inflammatoire, au foramen apical, marque le centre de l'irritation et de l'inflammation. La portion de la surface radiculaire logée dans le granulome montre une résorption de la dentine et du cément à la suite d'un long processus inflammatoire. L'espace de la membrane péridentaire est élargi et, entre la racine et l'os, on a du tissu de granulation et du tissu fibreux. A la périphérie du granulome, les polyblastes augmentent en nombre, et, près de l'os, le tissu est constitué principalement de fibroblastes et de fibres du tissu conjonctif avec seulement quelques cellules rondes inflammatoires. Le tissu conjonctif fibreux se présente sous forme de capsule autour de la zone inflammée. Près du centre du granulome, les polyblastes augmentent également en nombre. A la périphérie du granulome, une nouvelle trabécule osseuse est formée, qui croit de la paroi externe de l'os vers le tissu de granulation. Une telle régénération osseuse est un procédé souvent associé au processus inflammatoire apical. Les périodes d'activité, pendant lesquelles l'os est résorbé, alternent avec les périodes d'inactivité, pendant lesquelles l'os est régénéré. Ces périodes de réparation osseuse sont dues à une activité décrue dans le granulome, à une augmentation du pouvoir de défense de l'organisme, ou au drainage de l'exudat purulent.

Les différentes cellules qui prennent part au processus inflammatoire déclanché par le granulome sont: les phagocytes qui sont des leucocytes dérivés du

sang pour exterminer les bactéries. Les histiocytes pour la plupart sont des cellules errantes des tissus, quoique quelques-unes viennent du flot sanguin. Leur principale fonction est de disposer des cellules mortes, du tissu nécrotique et de certaines substances. Les polymorphonucléaires, pour leur part, non seulement digèrent les bactéries, mais, en étant détruites, elles libèrent une enzyme protéolytique, qui élimine le tissu nécrotique. Ces cellules sont le principal constituant du pus. Dans le cas d'infection légère et très prolongée, on observe de nombreux lymphocytes; ceux-ci ne possèdent pas de propriété phagocytaire, mais produisent des anticorps. Les plasmocytes sont presque toujours présents. On admet que les plasmocytes dérivent du tissu conjonctif commun, sous l'influence d'une irritation chronique, de quelque nature qu'elle soit. Ces cellules, qui n'ont aucune propriété phagocytaire, auraient une fonction d'ordre chimique. Les polyblastes dérivent des lymphocytes et des monocytes, qui sont des cellules phagocytaires. A la périphérie du granulome, on a du tissu cicatriciel, mais, vers le centre, les cellules inflammatoires (polyblastes) vont en augmentant. Les fibroblastes, au sens strict, ne prennent pas part au processus inflammatoire. Leur fonction est de réparer et de régénérer. Ils encapsulent la zone inflammée, remplacent le tissu disparu et jouent également un rôle dans la formation de la cicatrice. On rencontre également des cellules géantes dans le tissu de granulation autour des racines infectées; parfois elles entourent la surface de l'os adjacent comme des ostéoblastes. Le tissu de granulation est aussi constitué de néocapillaires, qui assurent l'irrigation de la zone exudative. Les autres cellules de l'exudat inflammatoire, les lymphocytes, les cellules du plasma et les éosinophiles ont un rôle encore obscur.

L'aspect histologique du granulome simple peut cependant varier. Il est plus ou moins fibreux ou vasculaire suivant que l'un ou l'autre de ses éléments prédomine. Des hémorragies ou un processus de dégénérescence peuvent aussi en modifier la structure microscopique. Un bris au centre du granulome conduit à la formation d'une cavité d'abcès. Il s'ensuit une collection centrale du pus. Si l'inflammation augmente, la petite zone de pus, autour de l'apex, s'étend et une large cavité d'abcès prend la place du tissu de granulation antérieur. La paroi de cette cavité est formée de tissu de granulation: la membrane pyogénique. Si d'un autre côté, l'infection du canal est controlée, la prolifération du tissu conjonctif avance de la périphérie vers le centre jusqu'à ce que le tissu de granulation se transforme en tissu cicatriciel et ensuite en os. Dans certains cas d'abcès apical, l'exudat purulent peut se drainer à travers le canal radiculaire de la dent ou dans un sinus. L'os se forme alors le long des parois de cette cavité artificielle. Fréquemment, l'inflammation ne se limite pas au maxillaire; le pus se fraye une voie à travers l'os et le muco-périoste pour s'extérioriser. Si ce drainage est bloqué, on a un arrêt de formation osseuse et la résorption prend place. Mais, à ce moment, il s'agit moins d'un granulome que de sa dégénérescence en abcès.

2—Le Granulome Simple.

Le granulome simple est essentiellement constitué par:

1—Une réaction hyperplasique du tissu conjonctif commun.

2—Une réaction vasculaire toujours très marquée, parfois assez intense pour présenter un aspect angiomateux.

3—La présence d'éléments libres du tissu conjonctif en plus ou moins grande abondance, au début, ou au cours de poussées inflammatoires aiguës.

Schématiquement, il se caractérise par une zone noire, entourant l'apex. C'est un épaississement considérable du ligament localisé à la seule région apicale. Il peut revêtir toutes les formes, depuis le croissant jusqu'à la sphère ou être déporté sur le côté de l'apex, ce qui donnera une image latérale nette s'il est proximal ou distal, floue s'il est vestibulaire ou interne.

La limite entre l'ombre grise ou noire du granulome et l'os sain est souvent assez nette. Si le granulome est près de la table externe du maxillaire qu'il tré-

pane, il a un contour flou. Cette image correspond en général à un processus chronique lent, sans poussées aiguës. Mais il est impossible d'affirmer, avec la radiographie, la nature exacte du processus histologique. Lorsque le diamètre de la tache sombre atteint ou dépasse 1 centimètre, on peut admettre qu'il ne s'agit plus d'un granulome mais d'un kyste. Lorsque la lésion chronique subie une poussée aiguë, il n'en résulte pas immédiatement des modifications radiographiques. Mais très rapidement, du fait surtout de l'aflux circulatoire concomitant à cette poussée aiguë, apparaissent sur la radiographie des modifications de la structure du tissu osseux. Un premier stage correspond à ce que les auteurs appellent "ostéite raréfiante chronique" avec suppuration ou granulome diffus. L'aire noire autour de l'apex est en général plus étendue, plus diffuse, mais moins foncée que précédemment. Le ligament, que l'on suit jusqu'à l'apex, s'élargit brusquement à quelques millimètres en deçà de l'apex et son ombre se perd dans la zone sombre péri-apicale. A un stade plus avancé (lésion plus ancienne) la zone sombre, gardant son contour diffus peut se projeter sur les apex de plusieurs dents, sans les intéresser, car on voit souvent le ligament de ces dernières conserver une épaisseur normale, témoignage de leur intégrité. Il n'est pas exceptionnel de voir une lésion apicale sur une dent déterminer la mortification de la dent voisine: les signes cependant en sont cliniques, avant d'être radiographiques.

Le granulome se divise en:

1—granulome simple: fait de vaisseaux sanguins, de tissu conjonctif, de bactéries et de cellules inflammatoires: lymphocytes, fibrocytes, exudat.

2—granulome suppurant: un abcès avec pus se forme à l'intérieur du granulome. Cet abcès est tapissé par des cellules endommagées, mais vivantes. La dent est sensible.

3—granulome avec fistule.

4—granulome avec formation épithéliale: le tissu épithélial environnant l'abcès peut proliférer et entourer l'abcès. C'est ce qu'on appelle un "kyste radiculaire."

3—*Epithélio-granulome.*

L'épithélio-granulome, dont l'aspect macroscopique et la structure histologique sont tout à fait comparables à ceux des granulomes simples, possède, de plus, des éléments épithéliaux. Schématiquement sur une coupe verticale, c'est-à-dire orientée suivant le grand axe de la dent, un épithélio-granulome relativement récent se présente comme une formation encapsulée qui, dans sa région centrale, est constituée par une masse épithéliale limitée extérieurement par la capsule. L'épithélium, très polymorphe, envoie dans le tissu conjonctif des prolongements disposés comme des rayons issus de la région apicale. Ces digitations épithéliales sont infiltrées de polynucéaires, tandis que le conjonctif renferme des plasmocytes qui, eux, se rassemblent assez souvent en nodules. Il semble qu'une double activité anime l'épithélio-granulome, qu'il y ait deux processus simultanés: l'un constructif, qui, s'observe surtout nettement dans la zone périphérique et l'autre destructif, dans la région profonde, voisine de l'apex, plus ou moins marquée suivant la virulence microbienne. Un certain équilibre se maintient entre ces deux tendances opposées, mais, équilibre instable, selon que l'hyperplasie ou la nécrose l'emporte sur l'autre.

La différence anatomo-pathologique qui existe entre le granulome simple et l'épithélio-granulome a été différemment expliquée suivant l'époque et les auteurs. La pathogénie du granulome simple, purement conjonctif, n'est pas discutée. On s'accorde pour reconnaître qu'il est très comparable au granulome banal, cutané ou muqueux. "Le granulome est dû à une infection atténuée, prolongée, peu virulente du tissu conjonctif recouvert d'un tissu de recouvrement, de protection. C'est le type de l'inflammation sub-aiguë aboutissant à la production de tissu de granulation." Telle est l'opinion généralement admise.

L'origine des éléments épithéliaux, que possèdent certains granulomes, ne peut être expliquée de façon satisfaisante

par l'invagination de la muqueuse buccale par une fistule vestibulaire, ni par les fins prolongements qu'enverrait la muqueuse gingivale dans le ligament. Actuellement la plupart des auteurs admettent que l'épithélium provient des débris épithéliaux paradentaires de Malassez. En conclusion, si la loi du granulome paradentaire est de se trouver soumis à l'organisation méthodique d'une première étape épithélio-granulomateuse, il n'est pas impossible que, dans certaines circonstances, un granulome purement conjonctif puisse se développer, mais ce n'est là qu'une éventualité exceptionnelle. Quelle qu'en soit la variété histologique, la formation d'un granulome s'accompagne des lésions osseuses et dentaires. Au début, il n'existe qu'un agrandissement de l'espace apical, aux dépens à la fois de l'alvéole osseux et de l'extrémité radiculaire. Le granulome, en se développant, se creuse une cavité dans le maxillaire. L'augmentation de la circulation sanguine, au voisinage du foyer inflammatoire, et la pression qu'exerce la tumeur suffisent à expliquer ces phénomèmes constants d'ostéolyse alvéolaire qui sont presque toujours les plus accentués, et ceux moins importants, d'otonlyse cémentaire et dentinaire. Il peut se faire que cette décalcification des travées osseuses, surtout dans la région incisive supérieure, s'étende plus ou moins loin dans l'épaisseur du maxillaire. Les sels de calcium rendus disponibles par la décalcification apicale et surtout par celle du fond alvéolaire vont être fixés, parfois sur le cément et produire de l'hypercémentose donnant à la racine une forme en baguette de tambour.

4—Granulome Interne.

Le granulome interne est une hyperplasie perforante chronique de la pulpe. Nous remarquons la présence d'un tissu de granulation dans la dent, avec résorption de la dentine du dedans en dehors. L'interprétation pathologique est plus difficile. Deux possibilités: soit que la résorption provienne de la pulpe, commence en dedans et progresse de la chambre pulpaire, ou bien elle origine de la membrane péridentaire et envahit la chambre pulpaire du dehors. Une inflammation chronique des tissus pulpaires, la transforme en tissu de granulation et résorbe les parois de la cavité pulpaire. On ne connaît aucun traitement de ce procédé de résorption idiopathique. Parfois le procédé de résorption s'arrête spontanément et la pulpe garde sa vitalité et la dent peut-être sauvée. Souvent la destruction devient si extensive que la dent est perdue. L'image radiographique du granulome interne se présente sous l'aspect d'une radiotransparence de forme arrondie au niveau du canal radiculaire et semble originer de la pulpe. On remarque une lyse interne de la dentine en regard de ce foyer infectieux, ordinairement au tiers supérieur de la racine.

5—Bactériologie du Granulome.

Il n'est pas facile de répondre à la question: "Y a-t-il des bactéries dans le granulome?" La plupart des observateurs sont d'avis qu'une grande partie des granulomes sont stériles. Dans des sections colorés au Gram, à travers des dents sans pulpe infectée, on trouve des bactéries en abondance dans le canal; mais le tissu de granulation et le kyste, attaché à l'apex de ces dents, était indemme de microorganismes. Ces observations ne sont pas difficiles à interpréter, si la vraie signification du granulome dentaire est comprise. Un granulome n'est pas un zone, où les bactéries vivent, mais où elles sont détruites. Les bactéries peuvent vivre et se multiplier dans les canaux infectés, en dehors de l'atteinte des éléments figurés du sang. Comme les microorganismes croissent, ils tendent à passer à travers le foramen apical et envahir les tissus mous. A l'encontre de cette zone de danger, l'organisme construit une barrière de tissu de granulation, qui détruit la bactérie, à mesure quelle croît en dehors du canal, et l'empêche d'entrer dans le tissu péridentaire. Comme règle, ce mécanisme de défense est satisfaisant, comme démontré par l'absence relative d'infection généralisée d'origine dentaire, en comparaison de la grande abondance d'infections dentaires chroniques localisées. Occasionnellement, et pour des raisons inconnues, ce mécanisme de défense faiblit. Alors

on trouve de larges quantités de bactéries dans le granulome. On rencontre des bactéries dans les granulomes avec des changements inflammatoires aigus, qui ont causé des symptômes de douleur et un commencement d'abcès alvéolaire aigu. La principale source de bactéries réside toujours dans un canal pauvrement ou mal traité mais non des tissus périradiculaires de la racine.

6—Diagnostic Radiographique.

La première manifestation de l'infection du canal radiculaire est une légère réaction inflammatoire périapicale de la part du péricément, qu'on appelle épaississement de la membrane péridentaire. C'est un procédé de résorption de la paroi interne de l'alvéole (lamina dura) avec l'inflammation du péricément, qui remplit l'espace ainsi créé. La dent est encore vivante. Puis avec l'extension de l'infection, on a la destruction de la "lamina dura" montrée par la radiographie. Le processus infectieux liquéfie l'os apical, et une petite zone de raréfaction entourée d'une condensation périphérique apparaît. Tous les types de raréfaction apicales contiennent essentiellement une combinaison de tissu de granulation, conjonctivo-fibreux, ou infiltration leucocytaire ou tissu épithélial. La radiographie nous donne une image typique pour chaque catégorie.

1—Type fibreux: apparence de zones définies de radio transparence sans présence de la ligne blanche périphérique.

2—Type d'abcès alvéolaire chronique: zone diffuse radiotransparente, qui est ordinairement accompagnée par la résorption de la racine. La zone transparente est aussi entourée d'une condensation osseuse.

3—Type épithelial: zone circonscrite de radiotransparence bien déterminée, bordée par une mince ligne blanche qui se détache nettement. La radiographie montre une zone distincte de transparence à limite bien définie, une mince ligne blanche. La ligne blanche représente la couche corticale osseuse, qui entoure immédiatement la membrane kystique. Dans les films périapicaux, comme il n'y a qu'une partie du kyste visible, on peut facilement le prendre pour un granulome. Pour éviter ces erreurs de diagnostic, il faut avoir une vue, qui comprenne toute la zone anormale et montre aussi une zone normale: radiographie latérale. A son début un petit kyste radiculaire ne peut-être distingué radiographiquement d'un granulome.

7—Suites de l'Inflammation Periapicale Chronique.

Les inflammations apicales de dents infectées ne conduisent pas toujours à une destruction osseuse. Parfois une irritation longue et faible, au lieu de résorber l'os cause une hyperplasie circonscrite ou une sclérose osseuse. Histologiquement, la zone sclérotique peut consister en une trabécule osseuse plus dense que l'os avoisinant, et, dans ces cas, la bordure entre l'os normal et l'os sclériotique est indistincte; il peut y avoir une île solide et l'os compact se tient en dehors et clairement contre l'os environnant. La radiographie montre une différence correspondante entre des deux types d'oséite condensée. Parfois il y a une zone diffuse d'os dense autour de la dent avec une infection périapicale chronique: de plus, une masse dense d'os peut-être localisée près de la racine malade. Aucune thérapie n'est encore connue pour cet état. Il se peut qu'originalement une granulome soit présent autour de la racine infectée et, qu'après l'inflammation, le tissu fibreux cicatriciel se change en os compact.

Résumé

1—L'inflammation des tissus mous et la lyse osseuse autour du foramen apical sont consécutives à une infection intrapulpaire.

2—Les cellules leucocytaires ont chacune un rôle spécifique dans le processus inflammatoire.

3—Le granulome peut se transformer soit en cavité d'abcès, soit, l'infection controlée, en tissu de granulation qui se cicatrise et s'ossifie ultérieurement.

4—L'image radiographique du granulome correspond à sa situation relative à la racine, et sa poussée aiguë se manifeste par les modifications osseuses apparentes.

5—L'épithelio-granulome s'accompagne d'ostéolyse alvéolaire accentuée, et les travées osseuses se décalcifie à la suite de la pression interne du liquide tumoral.

6—Un granulome n'est pas une zone où les bactérie vivent, mais où elles sont détruites. Si le mécanisme de défense organique faiblit, on trouve alors de larges quantités de bactéries dans le granulome.

7—L'épaississement de la membrane péridentaire est le premier indice radiographique d'invasion septique de la pulpe.

8—L'ostéite condensée est parfois la résultante de la transformation ostéofibreuse d'un tissu de granulation.

BIBLIOGRAPHIE

Kronfeld, Rudolf: "Histopathology of the Teeth and Their Surrounding Structures," Lea & Febiger. Second Edition. Pag. 183-188.

Rousseau; Decelle et Raison.—"Pathologie Buccale et Péri-Buccale," Tome—1-.1939.

Berger, Fargin-Fayolle, Fleury et Lacaisse—"Pathologie dentaire," Tome—11—Edition. Chompret.

McCall and Wald—"Clinical Dental Roentgenology Interpretation," 1946—Saunders, Page 228.

Masson, Dr Pierre—"Cours d'Anatomie Pathologique." 1946. U de M., F. de Méd.

Belanger Dr.—"Histologie de la dent," 1946, Faculté de Méd., Montréal.

Coolidge Ed.—"Clinical Pathology and Treatment of Dental Pulp and Periodontal Tissues," 2e Edition, Pag. 202-235.

Cahn, L. R.—"Conservative Treatment of Periapical Disease," Ann. N.Y. Journal Dent. 12: 328-333 Oct. 1942.

Cours post-scolaire en Chirurgie et Anesthésie à l'Université de Montréal

Le docteur Harry M. Seldin, chirurgien buccal de réputation internationale, donnera un cours de Chirurgie et d'Anesthésie buccale, à la faculté de Chirurgie Dentaire de l'Université de Montréal, du 14 au 19 novembre 1949.

Le docteur Seldin est bien connu des milieux scientifiques des Amériques du Nord et du Sud. Il est l'auteur du volume: "Practical Anesthesia for Dental and Oral Surgery."

Consultant au New York City Cancer Institute, au Harlem Hospital et au Peekskill Hospital, le docteur Seldin est membre des principales organisations et sociétés dentaires américaines et internationales.

Il est ancien chef de service de chirurgie et d'anesthésie du New York College of Dentistry.

Le docteur Seldin a bien consenti à venir à l'Université de Montréal, accompagné de deux de ses assistants, pour y donner une série de cours théoriques et de démonstrations cliniques.

M. le Docteur Harry M. Seldin

Le docteur Frederick N. Clement, de Toledo, Ohio, Président du Comité d'Anesthésiologie de l'Association Médicale Américaine, accompagnera le docteur Seldin.

Les frais d'inscription sont de soixante-cinq dollars.

On s'inscrit en s'adressant au:

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PAGES EDITORIALES

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Impressions sur la réunion de Saskatoon

La réunion annuelle du Bureau des Gouverneurs de l'Association Dentaire Canadienne a eu lieu à Saskatoon, du 2 au 7 juin. C'est dire que durant cinq jours, des délégués de toutes les parties du Canada ont étudié tous les aspects de l'exercice de la profession dentaire dans notre pays.

L'impression de fond, qui se dégage de ces assises, c'est que notre Association grandit en stature et en influence. Il suffit de se rappeler qu'il y a une dizaine année, les dentistes contribuaient la somme de cinquante sous chacun à l'entretien des activités de l'Association. Aujourd'hui, la moyenne des cotisations annuelles est de douze dollars par tête. C'est dire que les entreprises de l'A.D.C. sont plus nombreuses et menées plus loin, grâce à un budget plus considérable.

Le problème, qui a retenu d'avantage l'attention des délégués et suscité des discussions élaborées est celui du projet d'assurance-santé du gouvernement fédéral. Notre Association, à l'instar de groupements similaires d'autres pays, a tenu non pas à s'opposer de plein pied à ce mouvement, né d'un vent socialiste, qui souffle dans le monde, mais a voulu collaborer avec les autorités pour faire de cette loi une mesure, qui satisfasse les besoins de la population et des membres de la profession. Le Bureau des Gouverneurs, à la demande d'Ottawa, avait à préparer un programme défini d'assurance-santé dentaire pour doter la population canadienne de traitements effectifs et pour donner justice aux praticiens.

Il nous faudra revenir sur cette question, pour exposer aux dentistes de langue française le travail excellent de l'A.D.C. sur cette question.

Une autre décision d'envergure de cette réunion est le projet de publier les

discussions et les résolutions de l'Association et d'en expédier une copie à tous les membres. Cette mesure est de nature à mettre fin à des critiques venant de certaines parties du pays, disant que les membres n'étaient pas suffisamment tenus au courant des activités de leur organisme national; elle aura pour but aussi de faire connaitre à tous les dentistes le travail effectif de l'Association.

Le Comité d'Education Dentaire a présenté un rapport des plus complets sur les programmes d'éducation dentaire suivis dans chacune des cinq universités canadiennes. Ce comité a, de plus, formulé les exigences d'une école dentaire-type et des recommandations pour rendre plus uniforme l'éducation dentaire du Pacifique à l'Atlantique. Les discussions, qui ont suivi la présentation de ce rapport, ont formulé le désir que ce Comité s'emploie à étudier l'opportunité de l'établissement d'une organisation, qui remplacerait le Dominion Dental Council pour faire subir des examens aux candidats désirant pratiquer au travers le Canada. Cette organisation aurait un caractère vraiment national et serait dirigé par l'Association.

Les comités des Spécialistes et de la Spécialisation, des Services Dentaires Hospitaliers et de la Dentisterie Industrielle, ayant dans le passé, établi leur programme, ont, cette année, retouché quelques détails à leur présentation originale et maintiennent leurs positions prises sur leurs problèmes respectifs.

Les Comités du Journal ont encore une fois reconnu le Journal comme étant l'activité No 1 de l'Association et l'agent de publicité, par excellence, pour faire connaitre dans tous les cabinets canadiens et à l'étranger le travail de l'Association et de ses membres. A cause du coût exorbitant des frais d'impressions, la politique du Journal demeure la même et aucun changement important ne se produira d'ici douze mois.

Notre Association a décidé de prendre sa place sur le plan international en votant cinq cents dollars, en octroi, à la Fédération Dentaire Internationale.

Il serait trop long d'énumérer nos impression sur tous les rapports de chacun des nombreux comités de l'A.D.C. Nous avons mentionné les plus importants, à cause de leur actualité.

Le Congrès de l'Association, organisé conjointement avec la Western Canada Dental Society, fut remarquable par le nombre considérable de dentistes inscrits.

Enfin, nous rapportons de l'Ouest du Canada une impression des plus favorables de la mentalité de nos confrères de ces provinces. Ils pensent comme nous, veulent les mêmes choses que nous et désirent nous connaitre d'avantage.

GERARD DE MONTIGNY

Dans le monde dentaire

Innovation à McGill.

Le docteur Mowrey, doyen de la faculté de Chirurgie Dentaire de l'Université McGill, vient d'annoncer que son Ecole a fondé un département de recherches, qui porteront sur la pédodontie. Ce centre de recherches s'occupera de tous les problèmes, relevant de la dentisterie infantile.

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Réussite d'un dentiste canadien-français.

L'Université Columbia, de New York, vient de décerner au docteur Maurice Barthe, de Montréal, un certificat en Périodontologie (Certificate of Training). Le docteur Barthe a obtenu cette distinction à la suite d'une année d'études et de recherches portant sur les maladies gingivales à cette institution.

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Remarques sur le fonctionnement du plan d'assurance-santé obligatoire anglais.

1) Prévention—La mise en opération du plan, durant la première année, a contribué à un relâchement considérable dans les services dentaires donnés aux enfants. Quelques 15 à 20% des dentistes autrefois à l'emploi des écoles, ont démissionné. Dans le budget consacré au fonctionnement du plan, une bien petite somme a été prévue pour les recherches dentaires (environ $10,000).

2) Mésententes au sujet des salaires—Durant les discussions, qui ont précédé la rédaction de la loi, on s'est étendu longuement sur l'élaboration d'une base pour régler les mésententes au sujet du paiement des salaires. Il était entendu que le règlement de ces questions se ferait entre les représentants de la profession et ceux du Ministère de la Santé. Depuis la mise en marche du plan, deux développements se sont produits:

a) Le Comité Penman a été créé par le Gouvernement pour étudier la question d'honoraires adéquats pour les travaux exécutés au fauteuil. Comme on le sait, le Ministère, avant que ce Comité soumette son rapport, a réduit, de sa propre autorité, les honoraires des dentistes.

b) Un règlement a été établi, qui veut que les discussions au sujet des salaires, etc. se rapportant aux membres des professions, dites de la santé, soient référées au Ministère du Travail, qui *peut* nommer un Tribunal d'Arbitrage.

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Assurance-Chômage.

"Dans tous les cas, où le salaire est payé sur une base d'heure, à la journée, à la pièce ou au mille, ou sur toute autre base, où il est possible de diviser la somme d'argent gagnée par une unité physique quelconque, ou dans toutes les combinaisons possibles de ces méthodes, l'employé doit être assuré, peu importe la somme gagnée. Dans tous les cas où le salaire ou les honoraires n'entrent pas dans les catégories énumérées plus haut et quand l'employé gagne plus de $3120 par année, cet employé n'est pas assurable."

Cette directive a été donnée à l'A.D.C., par les autorités de la Loi d'Assurance-Chômage et s'applique à tout employé d'un cabinet dentaire, même un dentiste diplômé. Cet éclaircissement de la Loi avait été demandé pour répondre à un grand nombre de demandes de renseignements provenant de dentistes.

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Québec augmente son octroi à l'A.D.C.

Le Collège des Chirurgiens-Dentistes de la Province de Québec a officiellement averti l'Association Dentaire Canadienne, qu'à partir de janvier 1950, la cotisation de chaque membre de ce Collège à l'A.D.C. sera de $10.00 au lieu de $8.00, comme auparavant.

"Extrait du procès-verbal de l'assemblée du Bureau Provincial de Chirurgie Dentaire, tenue à Montréal, le samedi, 21 mai 1949, sous la présidence du docteur Ephrem Vinet:

Que le Collège des Chirurgiens-Dentistes de la Province de Québec verse à l'Association

Dentaire Canadienne, à compter du 1er janvier 1950, une contribution annuelle de $10.00 par membre en règle avec le Collège."

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Un étudiant de McGill gagne le prix du Mémorial de Guerre de l'A.D.C.

A la réunion des Gouverneurs de l'A.D.C., à Saskatoon, on a révélé que Morton R. Lang, de l'Université McGill avait gagné le premier prix du Mémorial de Guerre pour 1949. Le deuxième prix a été décerné à William H. MacNeil, de l'Université Dalhousie, d'Halifax.

Selon les règlements de prix du Mémorial, chacune des cinq Ecoles dentaires du pays peut soumettre trois thèses aux juges de ce concours. Le sujet du concours est choisi par le Comité du Mémorial de Guerre de l'A.D.C. et transmis à chaque Ecole avant l'ouverture des cours, à l'automne. Le sujet pour 1948-49 était:

"Les relations des glandes endocrines avec le développement dentaire et la santé buccale."

L'obtention de ces prix est une bonne note pour ces étudiants et pour les Ecoles, qu'ils ont fréquentées.

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Publication d'un résumé des activités de la réunion de l'A.D.C., à Saskatoon.

Le Bureau des Gouverneurs de l'A.D.C., qui s'est réuni à Saskatoon, en juin dernier, a décidé de publier un résumé des discussions et des résolutions de ces assisses et d'en faire parvenir une copie à tous les membres. Cette publication sera faite en français et en anglais le plus tôt possible.

Lettres aux Gouverneurs de l'A.D.C., vol. 5, no 15

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Elections à la Société Dentaire de Montréal.

Aux élections tenues le 17 mai 1949, le comité exécutif a été constitué de cette façon pour le terme d'office 1949-1950.

Aviseur: Dr Louis Lépine (président sortant de charge); président: Dr Victorien Dubé; président-élu: Dr Guy Langelier; vice-président: Dr Chs-Aug. Durand; trésorier: Dr Maurice Gervais; secrétaire: Dr Roger Charette; ass.-secrétaire: Dr Léon Carpentier; bibliothécaire: Dr Eugène Lussier; conseillers: Drs Jacques Demers, Antoine Raymond, Guy Lefrançois, Guy Charland.

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Société Dentaire de St-Hyacinthe

Les élections annuelles de la Société Dentaire de St-Hyacinthe ont eu lieu le 31 mai et ont donné les résultats suivants:

Président: Laurent Picard; vice-président: Lucien Gaboury; secrétaire-trésorier: René David; aviseur: Laurent Deslauriers (président sortant de charge); directeurs: A. Bédard, Maurice Bérard, Hyacinthe Breton, Ernest Daigle, Yves Lafleur, Rodolphe Philie, Albert Tousignant, Laurent Bouthillier, Guy Poirier.

A cette réunion, qui consistait en un souper groupant la plupart des dentistes de cette région, on y a discuté divers problèmes concernant la profession dentaire, particulièrement la répression de la pratique illegale.

UNIVERSITE DE MONTREAL

Cours post-scolaires offerts à la profession durant 1949-1950

Chirurgie et anesthésie
Du 14 au 19 novembre (Cours du Dr Seldin)
Du 24 au 29 avril
Les 6, 7, 9, 14, 15 et 16 février
Les 6, 7, 9, 14, 15 et 16 mars

Endodontie:
Du 16 au 21 janvier
Les 8, 15 et 22 novembre
Les 18, 25 avril et 2 mai

Prothèse
Du 14 au 19 novembre
Du 5 au 10 décembre
Du 16 au 21 janvier
Du 6 au 11 février
Du 20 au 26 février
Du 6 au 11 mars

Pédodontie
Les 24, 25, 26 et 27 janvier
Les 18, 19, 20 et 21 avril

Diagnostic
Du 6 au 11 février
Du 13 au 18 mars

Orthodontie
Du 21 au 26 novembre

GELODONTIE*

par YVES LAFLEUR, D.D.S., St-Hyacinthe, P. Qué.

On accepte comme un fait établi qu'un saint homme triste est un triste saint homme. On pourrait certainement dire la même chose d'une revue, dentaire ou autre, dans laquelle on ne publierait jamais quelque chose de gai ou de rafraichissant.

C'est un peu dans ce but que "Oral Hygiene" a, chaque mois, une page intitulée "Laffondontia." De même dans le "Dental Digest," E.J.R. (nul autre que le docteur Ryan, Rédacteur du Digest) écrit depuis plusieur années la rubrique "On the Cuff" (littéralement: "Sur le poignet de chemise"). Dans cette colonne, on peut trouver, chaque mois, diverses réflexions, des compte-rendus, des remarques des plus caustiques ou humoristiques, qui donnent à cette colonne une atmosphère reposante.

Ainsi E.J.R., s'étant rendu au meeting du Wisconsin Dental Society, y a écouté une conférence donnée par un monsieur C. R. Lawrence, de Enid, Okla., dans laquelle ce dernier discute quelques aspects importants des relations entre dentistes et patients, particulièrement au sujet de certain services gratuits.

Services Gratuits

Lawrence prétend, entre autres choses, qu'en Amérique du Nord, il y a trois grandes nécessités de la vie courante, qui sont fournies gratuitement: 1) L'air pour les pneus; 2—les soins spirituels, fournis gratuitement par les clergés de toute dénominations; 3—consultations dentaires et examens bénévoles. (Il aurait pu ajouter; 4—air chaud, en quantité formidable, fourni gratuitement par les politiciens et les hableurs de tout acabit.)

Le Revenu National Et Les Dentistes

Dans le domaine des choses plaisantes, monsieur Lawrence vous dit, qu'au point de vue du revenu national, les dentistes se classent parmi les premiers 8% de la population. Par contre, les deux-tiers des veuves des dentistes sont ou indigentes ou forcées de travailler pour gagner leur vie, et cela tout simplement parce que leurs maris ne les ont pas tenues au courant de leurs affaires.

Testament D'un Dentiste

Après quelques autres observations dans la même veine, Lawrence termine en donnant un exemple typique de ce qui serait, à ce qu'il prétend, un modèle de testament pour la plupart des dentistes.

"Un dentiste venait d'être averti par son médecin qu'il n'avait que quelques semaines à vivre. Il fit donc venir son avocat dans le but de lui communiquer ses dernières volontés (aux Etats-Unis, les avocats remplissent aussi la fonction de notaire). Voici à peu près la teneur de ce document:

"Veuillez prendre les mesures nécessaires pour que ma femme hérite de mon compte de banque soutiré et de mes billets promissoires: elle seule pourra facilement expliquer leur raison d'être.

"A mon fils, je lègue le solde de mes versements sur mon auto acheté à tempérament. Il faudra enfin qu'il se décide à travailler pour continuer les versements.

"Aux dépots dentaires, je lègue mon 'good-will.' Ils ont pris sur moi de grosses chances et ils méritent certainement cette marque de reconnaissance de ma part.

"Mon installation de bureau, (chaises, moteurs, instruments) vendez-les au regrattier, qui meurt d'envie de les posséder depuis plusieurs années. La somme ainsi obtenue devrait tout juste suffir à payer vos honoraires professionnels.

"Je veux que vous demandiez comme porteurs à mes funérailles six de mes

*Veuiller consulter votre dictionnaire grec—"gelos, gelontos" = rire

meilleurs créanciers. Ils m'ont porté dans leurs livres pendant si longtemps qu'ils sont aussi bien de finir la tâche."

Sera-t-il Paye?

Sur une note plus gaie, voici qu'un entrefilet dans le St. Thomas (Ont.) Times Journal, nous apprend qu'un dentiste d'Angleterre (à Eastbourne) s'est enlevé à lui-même deux dents et a envoyé une note pour services professionnels au gouvernement britannique, d'après les lois d'assurances-santé socialisée. Quels sont ses chances d'être payé? Les paris sont ouverts!

Il A Bien Tourne

Tout le monde connait, au moins pour en avoir entendu parler, la fameuse piste de courses de Santa Anita, en Californie. C'est un des endroits du genre, dans le monde entier, où il se dépense le plus d'argent pour les courses, quelquechose comme $125,000,000 par an.

Ce que beaucoup ignorent, cependant, c'est que le principal artisan du succès de cette piste de courses, c'est un chirurgien-dentiste, le Dr Charles H. Straub. Bien qu'il reçoive maintenant un très gros salaire, comme gérant et vice-président de Santa Anita, le Dr Straub, pour des raisons sentimentales, continue à se maintenir en règle avec le Collège des Dentistes de Californie.

Du temps qu'il pratiquait activement, le Dr Straub a été l'un des premiers à appliquer une politique d'annonces à haute pression et des méthodes de "assembly-line" à la dentisterie. Ce n'est évidemment pas ce qu'il a fait de mieux, car aujourd'hui encore les annonciers dentaires, en Californie, prospèrent d'une façon scandaleuse, "écoeurante." En plus de s'occuper de courses de chevaux, le Dr Straub, est président du club de baseball San-Francisco Seals, de la ligue du Pacifique. Il a vendu des joueurs de son équipe à des clubs des ligues majeures pour des prix fabuleux, ce qui ne s'était jamais vu avant lui.

Le Dr Straub fait aussi de l'opéra et de la musique symphonique. Sous sa direction, Santa Anita est reconnue pour une des piste de courses les mieux administrées, les plus honnêtes et les mieux policées. La morale de tout cela est que, tout comme le journalisme, la dentisterie mène à tout, pourvu qu'on puisse en sortir. Salut!

Financement du projet d'assurance-santé obligatoire, aux Etats-Unis

Dans le bill d'assurance-santé actuellement en discussion devant le Congrès américain, le financement de ce projet s'établirait comme suit: une taxe de 3% serait imposée sur tous les salaires, à raison de 1½% payé par l'employeur et 1½% payé par l'employé. Ce nouvel impôt s'appliquerait sur les premiers $4,800 du salaire annuel. Le gouvernement contribuerait ½%, la première année, et 1% les années subséquentes. Le gouvernement, de plus, défraierait les dépenses nécessitées par la formation des médecins, des dentistes et des garde-malades et la construction des hôpitaux.

Photo by M. H. Garvin, Winnipeg, Manitoba

CLEARWATER BAY

Lake of the Woods, Ontario

I think we may assert that in a hundred men there are more than ninety who are what they are, good or bad, useful or pernicious to society, from the instruction they have received. It is on education that depend the great differences observable among them. The least and most imperceptible impressions received in our infancy have consequences of long duration. It is with these first impressions as with a river, whose waters we can easily turn, by different canals, in opposite courses; so that from the insensible direction the stream receives at its source, it takes different directions, and at last arrives at places far different from each other; and with the same facility we may, I think, turn the minds of children to what direction we choose.—LOCKE.

CONRAD GODIN, D.D.S.
Trois-Rivières, Quebec

Graduate of the Faculty of Dental Surgery of the Université de Montréal 1933, and of the Faculty of Dentistry, University of Toronto, 1934.

Past President of the Trois-Rivières and District Dental Society.

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Director of the Trois-Rivières Rotary Club.

Active member of the American Academy of Dental Medicine.

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DENTAL PUBLIC HEALTH
A Look Into the Future*

by DR. A. E. CHEGWIN,† Regina, Saskatchewan

WHAT is dental public health? With thirty years of contracts in dentistry and with dentists I still hold to the ideal of what I choose as a slogan for dental health in Saskatchewan—"All the teeth, in health, through life, for everyone." This may seem an impossible ideal but at least it is a goal to strive for. It will require a considerable change in thinking for all of us which if adopted can only result in an enhanced reputation and public appreciation for the profession of dentistry and its individual members. I want to quote from the preface to "Dentistry in Public Health" by Pelton and Wisan as follows, "It may be said of Dentistry in Public Health as Victor Hugo once remarked: 'Nothing in this world is so powerful as an idea whose hour has come'."

Many of the problems we face today are of our own making. Let us suggest a few as a background for this changed point of view. Not many years have elapsed since it was common practice to construct gold crowns and gold crown bridges as restorations. Putting it plainly, did we stress the gold (or allow the public to retain that impression), or the service—if the former, can we blame the public for evaluating our service on a purely mercantile basis? If the latter, why should there be any difficulty in charging and collecting a reasonable fee for valuable advice to a parent on dietary control of caries, backed up by scientific evidence such as a lactobacillus count?

The advent of new and improved materials provides another illustration of what to me has been poor psychology. In the field of health many outstanding and history-making contributions to the public welfare have been made after years of painstaking research without thought of reward in the form of royalty, patent or otherwise. Insulin is probably an outstanding example—how many people owe their lives to its wondrous power and can the contributions of these continued lives to society be measured in terms of dollars and cents? New and more aesthetic base materials have been made available for use in dentures. Has the profession passed on to the public even in part these scientific advances, or merely at little or no cost to themselves adopted them as a means of increasing income because of their enhanced sales appeal?

I know these are disturbing words but I cannot agree with a friend of mine in a similar situation to my own, who feels that we shall lose the cooperation of the profession if we, to use his own words, start lighting fires un-

*Presented at the Convention of the Canadian Dental Association and Western Canada Dental Society in Saskatoon, Saskatchewan, June 6, 1949.
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der it. Am I right when I suggest that all revolutions including those of the mind, are accompanied by fire?

We are living in a world where the germs of ideas sown many years ago are now epidemic. Some are good and some are bad. We hear much of the cold war and the iron curtain. I tell you frankly, we in dentistry are in the midst of that war and it is a war of ideas, and those ideas are not confined by iron or any other kind of curtains. I do not fear an idea I do not agree with; what I do fear is the refusal to develop and go along with a better idea to combat the one I do not agree with.

I do not know the answer to all our problems but I take my hat off to no man in recognizing truth and fact when I see it. One does not have to be a student of theology or economics or politics to see the trend of the times. We are living in an age when a more rapid advance is being made in the application of the teachings of Christianity to society than in any previous era. And why? Because it is the only answer to the thing most thinking Canadians dread the most—that thing which will undoubtedly be the cause of the next world war if there be such. Many are wondering what they as individuals can do about it, feeling that only powerful organizations or governments can accomplish anything. I tell you this thing must start in our own individual hearts and with that I come back to Dental Public Health.

The Finger of Truth

Is dentistry a means to an end? If so, to what end? The finger of truth points the way for the dentistry of the future. The C.D.A. and the A.D.A. have both laid down the principles. I shall quote only from the presentation to the special committee of the House of Commons on Social Security dated May 11, 1943. "During the childhood period is the most feasible and economical time in the life of the individual when control of dental disease can be put into effect. The ravages of dental caries among the children of the nation is a well-known condition among all public health officials, often spoken of as a national disgrace. It is pointed out that surveys where no school dental services have been in effect now show a condition of 95 to 98% of the children possessing carious teeth. In those municipalities where such service has been initiated the incidence of dental caries is reduced a considerable amount, varying from 40 to 50% in many instances. A factor which hitherto has militated against the reduction of dental disease has been the lack of financial resources in many cases. The provision of this financial support would produce a better situation, the result of which should be the establishment of a future Canadian population possessing abundantly more dentally fit oral conditions. The dental profession does not wish to go on record due to the lack of personnel, as able to care for all the insured herein suggested, but does undertake to carry out the proposed plan to the best of its ability."

Dental Care for Children

"The profession, taking into account the available personnel and the wise expenditures of moneys, are long since convinced that the best method of properly attacking the problem of dental disease is through the child. The retaining of a child's mouth in a condition of health is an objective far more obtainable than making any attempt to remedy the condition of the dental cripples among the whole population." Then follow some details of administration which parallel very closely the recommendations as approved by the A.D.A. I should like to quote one more cogent sentence from this report—"In time of 'war emergency', a dental program for treatment is essential and most appropriate but for an all-time peace proposal it would prove disastrous for the profession and the public as well."

In time of war we recruited 25% of our dental labour force to provide service for the 10% of our population enlisted in the armed forces. This was deemed necessary to bring our armed forces personnel up to a standard of

dental fitness and keep them there for the successful prosecution of the war. This was not only a humane but also a patriotic duty.

In time of peace, what are we doing to prevent such a condition from again developing in our midst? There is much talk and a plan by which a satisfactory beginning could be instituted. Has there been suitable action or are we all looking for the other fellow to do something about it? Are facilities for the training of additional dentists being expanded to allow such a plan to make a start? Are we as a profession prepared to consider and legalize other methods of handling this program?

Surely the appointment of Dental Directors by the provinces, whose responsibility it is to initiate and administer health programs, cannot be expected by itself to solve the many problems of Dental Health for the people. As I see it the profession is now definitely at the cross-roads and cannot long delay making a definite decision: they are being squeezed by their own chickens come home to roost. May I illustrate as follows:

(1.) For thirty years or more, in one form or another, sporadic pressure has produced various inadequate programs of public health dental services usually in schools. At the same time, largely through the efforts of the Canadian Hygiene Council, public bodies and public opinion have been prepared and educated for something of a more adequate character.

(2.) The limiting factor in the past has largely been the financing of such projects. Now almost without notice, overnight so to speak, financial limitations have ceased to be the decisive factor. We are face to face with a tremendous demand and vastly inadequate personnel to meet it. Let me illustrate from my own experience here. Under legislation establishing Health Regions, Regional Health Boards have power to initiate schemes of health care involving medical, dental and other services. Financial assistance is now forthcoming from both Federal and Provincial sources and provision is made in the Act for such Boards, which are appointed from the municipal level, to levy in various ways for the municipal share of the costs of such health schemes. Now I wish to point out that these Boards are responsible bodies and largely composed of laymen. In my contacts with such boards to date, the idea of preventive dental care programs for children, as suggested by the C.D.A. and the A.D.A., has caught on in the most astounding manner. A reasonable explanation of what philosophy lies behind the program has been sufficiently demonstrated to convince these high-minded laymen of the value of such service even when it is their responsibility to assess the reactions of the public to an increase in taxation. In short, we in Saskatchewan have the equipment, a budget to finance the programs in several regions and not enough men appearing to put the programs into effect. Are the salaries insufficient or is the idea of a salary what is blocking our progress? The fact is there are not enough men being graduated for replacements, care for the increase in population and the increased demand due to greater public appreciation of the value of dental service and our own programs of preventive dental care for the young. What is to be done about it? May I suggest that we must not, cannot avoid or evade the responsibility. It is definitely on the doorstep of organized Canadian dentistry and requires quick action. Why quick action, you may well ask. Because as I have tried to point out, the public has been sold on the need and there are too many laymen deeply concerned about it to wait indefinitely for a lackadaisical profession to provide a solution. Let us have action before it is too late and an awakened public takes the matter into its own hands. Are these too strong words for the profession to swallow? If so, maybe an emetic is required. Reverse peristalsis frequently serves a useful purpose for an

overburdened stomach, surfeited perhaps by overfeeding or over something else.

The Alternative

Are we prepared as individual members to pay any more than lip service to those principles previously mentioned? If so, the future is bright; if not, let us draw aside a curtain and view the alternative before us. I shall only mention what is occurring in Great Britain, plainly evident to only a casual observer. Can the ideal developed over the years by the real thinkers in the profession survive in such circumstances? What is happening to the school services in England, alone proves that prevention and control of dental disease in that country is on the way out. The mass of dental defects together with the limited manpower, a much worse ratio than even exists in this country, must result in the prostitution of the profession either to the pressure from the older groups, or to the goddess of gold. Let me draw to your attention the dental payments made under Great Britain's Public Health Services Act which rose from $205,000.00 in July, the first month of operation, to $9,845,000.00 by November, per month.

Allow me to quote from a bill of rights for children proposed to the United Nations:

1. The child must be protected irrespective of considerations of race, nationality, religion, political belief, economic or social condition.

2. The child must be given the means required for his normal physical, mental and social development, including the provision of adequate housing, nutrition and education. The child has a right to the best care of his health, which is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

And again from the Canadian Children's Charter—"Good health through the provision of sufficient medical, dental and mental health services", and again from the Health Services Bill in Australia—Clause 11 of the Dental Scheme—"Attack on the problem of providing regular treatment for all children, using existing facilities and special dental clinics in rural areas, mobile dental surgeries would be necessary. The shortage of dentists would severely limit the age range of the scheme at its inception, but eventually a full service for all children would be available. The government is examining the New Zealand scheme of using specially trained dental hygienists for limited activity in treating school children and would consider training hygienists in Australia if necessary".

Incidentally, there are approximately 3,000 dentists in Australia—not a bad ratio in comparison to our own.

Practical Answers

And now to the practical answers to the problem insofar as lies within our power! I shall give them by numbers and refer particularly to our own situation in Western Canada.

1. A re-dedication by the private practitioner in his responsibility as comprising a majority of those rendering dental service to the public.

Here is the obligation of Dr. Joseph H. Kaufman as proposed for adoption by the profession in New Hampshire by Dr. H. Shirley Dwyer, Dental Director of the State Health Department. Dentistry's obligation to children: "We pledge allegiance to the child, and to every child's future, for which we serve, a wholesome and spiritual life of usefulness, with health and happiness for all."

Let me tell you what has been accomplished by the dental staff in the Welland and District Health unit under the able leadership of Dr. S. Lee Honey, Editor of the Ontario Dental Journal. In two years I am informed, by a program of education and frequent regular dental examination, children's appointments in the offices of private practitioners have been increased from one per dentist per day to seven per dentist per day. The unit does not provide dental treatment services. I was privileged to spend some

time with Dr. Honey while examining children in several schools and I can truthfully say I have not seen as high an average of beautiful repeat mouths in my experience. What a thrill and what better word to describe a healthy mouth, at least to a dentist!

2. Support by every means available, oral and psychological, through clubs of various kinds and in our private offices and conversations, every governmental move to expand legitimate health services, so that every group may receive its just due, particularly the youth. The ultimate aim of our profession can only be achieved by the combined efforts of all, both privately and publicly, with ever-increasing emphasis where the solution lies.

As I travel around the province and contact public health nurses in the field—*we have so little public dental service*—I am constantly confronted by the statement (and hang my head in shame) that parents claim to have taken their children for dental service to be told, "Oh, we won't bother about those teeth, they'll fall out anyway". This must *not* be. The very psychology of this statement minimizes the seriousness of dental disease in the minds of the hearers and brings us one step closer to the horse and buggy school of "Blood and Vulcanite" dentistry. I suppose in this day and age it should be more appropriately labelled "Blood and Acrylic" dentistry.

3. An acquaintance with and an appreciation of the efforts and results of research in the field of caries prevention and control; Dr. Ken Easlick of Michigan is sound in his statement on this. There is no one answer. All preventive measures must be used in their proper order and carelessness or short-cuts relegated to those who know no better.

I shall repeat these suggestions, pretty well agreed to by all organized bodies in dentistry, yet still far in the future in this part of the country for many, many people.

1. Regular and frequent dental examinations of all, but particularly children.

2. Good restorative operative dentistry rendered in time.

3. Intensive education in dietary control by every means available. This will be unpopular but is extremely necessary.

4. Use of dentifrices specifically developed to neutralize carbohydrate fermentation processes.

5. Use of fluorine (topically and in water supplies) after thorough public education and understanding.

May I close with three quotations from the September issue of the Royal Bank monthly letter under the title "School Children's Health".

1. The only limitations on health progress in any age are the bounds set by the growth of scientific knowledge, the willingness of those in authority to introduce advanced ideas, and the readiness of people to pay the cost—a price which is low, relative to the resulting good.

2. It is a good thing to cure illness and great skill is shown in treatment of those smitten by disease, but it is better and shows more wisdom to prevent illness.

3. The penalty of neglect! As Horace Mann has said, "All through the life of a feeble-bodied man, his path is lined with memory's gravestones which mark the spots where noble enterprises perished for lack of physical vigour to embody them in deeds."

There are problems of personnel and equipment and funds, but these should not be allowed to baffle people of good will and good sense. The objective is well worth striving for.

Public Health Grants have greatly assisted in funds and equipment. We now need men, *many men of good will.* I rest my case with bowed head in these words of the Master—"Inasmuch as ye have done it unto one of the least of these My brethren, ye have done it unto Me".

The man who rows a boat generally doesn't have time to rock it.—"Delco Doings."

DENTAL HEALTH*

by DR. H. K. BROWN, Ottawa, Ontario
Chief, Dental Health Division, Department of National Health and Welfare

DENTISTRY is on the move in public health, and public health is on the move in dentistry. There is nothing so powerful as an idea whose hour has come. The hour of dentistry in public health is here. Whether it will be memorable for its successes or for its failures depends upon the use that we as a profession make of it. We, the Dental Profession, have a challenge to meet.

Public attention has been focussed upon us during recent times as it has never been before. Articles regarding us and our services have appeared in many leading journals on this continent; some praising, others misleading, many critical, but all have one characteristic in common—the hope that a new day is dawning in the field of dentistry, the prevention of dental disease.

Many members of our profession have been irked by this publicity—and more by its consequences. Let us be of good cheer, and learn how to take it philosophically. It is probable that we shall experience a great deal more of it. And all because the hour of dentistry in public health has come!

A few short years ago the domain of dentistry was confined by the four walls of the dental office. This is no longer so. The public health movement has caught us up in its forward surge and we find that some of the major responsibilities of dentistry are outside our office walls. "Times have changed", as they say. Can we as a profession adapt ourselves to the demands of changing times? The dinosaur, the mastodon and the dodo couldn't. Yet they were very successful in their old environment — even "big shots".

The public health movement is big, powerful and diversified. It involves the services, in a correlated manner, of all the health professions—Medicine, Dentistry, Veterinary Medicine, Nursing, Public Health Engineering, plus many of the auxiliary professions, voluntary health organizations such as the Red Cross, the Blue Cross, the Health League, the Anti-T.B. League, the Victorian Order of Nurses, numerous social welfare agencies, the ten provincial governments and the federal government. It cuts across and envelops all lines of party, creed, class and colour.

To any who may be concerned as to what to do about it may I suggest the philosophy of an old American politician, who, when asked the secret of his success replied "waal, son, whenever I see a movement that's too big to oppose I always join it".

Effective dental participation in public health involves the consideration of more factors of professional training, anxiliary dental professions, research, and organization than there is time to discuss on this occasion.

Health Education

Public health education is the most important single factor in public health. It is the process of closing the gap between the amount of health information in the possession of the health professions and that in the possession of the people. It is the highest responsibility of every member of the health professions. But let us not deceive ourselves into thinking that public health goes no further than that. Every effort made on a community basis, to combat disease and improve health is a public health effort, whether that effort be quarantine, sanitation, immunization, nutri-

*Presented before the joint convention of the Canadian Dental Association and the Western Canada Dental Society in Saskatoon, Saskatchewan, June 6, 1949.

tion; or early systematic treatment. Also public health in nature are those efforts on a community basis directed towards the preservation of the mental and moral health of the community —the work of the schools and the churches. The term is indeed broad in its scope.

The key to the success of any public health program is education. This is recognized by every branch of public health. Every provincial government and the federal government has within its department of health a Health Education Division, made up of people trained in educational psychology and the techniques of adult and child education. These divisions are charged with the responsibility of educating the public in all fields of health whether it be Cancer, T.B., V.D., Child and Maternal Health, Nutrition, Mental or Dental Health. The members of these divisions, who are trained in the technical fields of their own divisions assist the health educators in order to ensure the technical and scientific soundness of the subject matter to be presented to the public.

In the Department of National Health and Welfare the Information Services Division is the one charged with the responsibility of health education. We are fortunate enough to have on our program here today a representative of that Division in the person of Mrs. Helen Marsh who will address you presently. Mrs. Marsh has been actively interested in the preparation of much of our dental health material during the past year.

The function of my division of the Department—the Dental Health Division—in relation to the preparation of dental health educational material, is to see that the ideas presented keep pace with the progress of modern dental science. In this work it is important that careful distinction be drawn between opinion and established scientific fact. The importance of distinguishing between fact and opinion is illustrated by the findings obtained in a survey of dental health literature made by a committee in Minnesota in 1941. A large representative quantity of literature prepared by dental associations and departments of health was examined and classified into three categories; factual, fallacious, and controversial. Only 46% of it was found to be factual, 48% was found to be controversial, and the balance, 6%, actually fallacious. I think you will agree that the teaching of such a mixture of facts, doubts and fallacies would lead to more public confusion than public education.

Scientific Facts

In recent months several dentists interested in public health have asked what steps could be taken to ensure agreement on public health educational material. The answer is simple; let us stick as closely as possible to established scientific facts, and try to avoid incorporating in our public health teachings even the most reputable opinion, if we know it to be only an opinion. If we are discussing nutrition, fluorine, oral hygiene, or any other subject related to dental health let us be sure that whatever we say or write is based on the best available scientific knowledge of our day and not just the opinion of some faddist or someone with a commercial axe to grind, or somebody more vocal than well informed. This is our guiding principle in assisting the Information Services Division in the preparation of any dental health educational material emanating from our department.

When we hear growlers' grumblings, the Persian proverb comes to mind: "I had no shoes and complained until I met a man who had no feet."—Canadian Business.

God will not look you over for medals, degrees or diplomas, but for scars.—Elbert Hubbard.

THE RELATION OF THE ENDOCRINES TO DENTAL DEVELOPMENT AND ORAL HEALTH*

by WILLIAM H. MACNEIL, Faculty of Dentistry, Dalhousie University, Halifax, N.S.

ALL living things are the product of the interplay of two phenomena, heredity and environment. Environment in turn can be classified as internal or external, and without doubt one of the most important contributors to internal environment is the endocrine system. The endocrines therefore merit the highest consideration in the investigation of all phenomena concerning the oral cavity. They must receive their rightful place in the search for the aetiological factors underlying caries, peridontoclasia and maloclusion, the great tripod of dentistry.

Unfortunately the endocrines have often taken a back seat in dental investigation. This can be partly explained in that the ductless glands lie within the realm of the physiologist and internist. Further, it is comparatively recent that dental research has become genuinely interested in the biologic as well as the mechanical, in which fields it has made such great accomplishments. This does not mean that dental literature is lacking in information relating the ductless glands to dental health, or that no investigation has been carried out in this field. On the other hand we might say there has been too much written linking the endocrines with dental phenomena, too much that is conjecture, that lacks scientific evidence, and too much that is absolutely untrue. Much of the dental literature on endocrines consists of addresses by persons who have made little or no experimentation or investigation and who base conclusions on impressions and wishful thinking. It appears also that the internists are far more guilty in this respect than the dental profession.

As a result the problem of surveying the literature on the endocrines and their relation to oral health and dental development is very difficult. It is not easy to shift the chaff from the wheat. Statements like that of Langford, "Dental variations are always due to endocrine influence, whether it be in size, shape, position, colour, stability or a tendency to decay",[36] are readily rejected. Other statements cannot be so easily eliminated, especially when backed by experimental or statistical evidence. In these cases the varying opinions and conclusions are presented, some of which are in direct conflict. We must depend upon future research to confirm some and discredit others.

The Pituitary

Perhaps more has been written about the effects of pituitary dysfunction on the dentition than any other endocrine. This is reasonable because among other things the pituitary regulates growth and disordered growth can have serious consequences in the oral cavity.

The *posterior lobe* secretes two well known hormones, pitressin and pitocin, and although these hormones have been extensively investigated and their actions well known to medical science, there is nothing in the literature which links them with the oral cavity.[37,39]

The hormone of the *pars intermedia* is concerned among other things with the formation of melanin, and through its influence on the adrenal glands may play a part in the oral pigmentation of Addison's disease.

The *anterior lobe* hormones are generally considered seven in number, the gonadotropic, thyrotropic, adrenotro-

*Second Prize Essay in the Canadian Dental Association War Memorial Scholarship Competition.

pic, parathyrotropic, lactogenic, metabolic and growth hormones. The first four act through the respective gland effected, although it might be observed here that the presence of a parathyrotropic hormone is disputed.[40] The lactogenic and metabolic hormones of the pituitary work in conjunction with the gonads and thyroid secretions respectively, and have no specific dental connection other than the fact that metabolic changes in general may be reflected in the dentition,[20] and calcium under special circumstances may be partially drawn from the alveolar bones for the production of milk.[11]

The *growth hormone* is of particular interest to us. As the time factor is all important in the effects of its hyper or hyposecretion we shall consider these effects in infancy, before puberty and following puberty. Such common abnormalities as cleft palate and harelip have been attributed to lack of growth impetus provided by the anterior pituitary hormone, this hyposecretion being on the part of the mother or the embryo or both. Similarly a high, narrow, arched palate may be attributed to the same factors.[11]

Hypopituitarism in infancy and childhood results in the pituitary or infantile dwarf, characterized by undersize of all parts, the dwarf being symmetrically proportioned but understatured and underdeveloped. The mental development is not usually involved as in cretinism because the condition is seldom manifest before four to six years of age. The earlier the onset of the condition the more serious the results.[50]

This general retarded development is accompanied by a delay in the eruption of the permanent teeth and a corresponding retention of the deciduous teeth. This delay may result in a loss of "structural balance",[31] and together with insufficient increase in vertical height and arch length contributes to a crowding of the teeth. The mandible tends to be undersized in relation to the maxilla, a further factor in the crowding of the teeth.[31,50] The size of the permanent crowns is not affected; they are laid down before the onset of the disease. The small teeth frequently reported in infantile dwarfs [10,39] are the result of partial eruption. Steuer[59] records in great detail the dental aspects of a fourteen-year-old infantile dwarf and his observations agree with those summarized here.

Hypophysectomy in dogs and rodents supports the above clinical findings and in addition to retarded eruption revealed short roots with widened pulp chambers and open apical foramen.[20] Schour[54] summarizes his findings on the incisors of hypophysectomized rats as (1) progressive retardation and final cessation of eruption, (2) distortion of form especially in the basal zone, (3) smaller size of teeth (2/3 normal size). Histological findings were aborted enamel formations and hypoplastic enamel areas. He makes the interesting observation that the disturbance and occasional disappearance of the normal blood supply following hypophysectomy in the rat may be a primary factor in producing these alterations. Rat molars which more resemble human teeth than the incisors have been recorded as retarded in eruption with shortened roots. The histological findings were large pulp chambers and pulp canals with reduced blood supply to the pulp; the enamel and dentine were normal, but the epithelial attachment was absent in several cases near the cemento-enamel junction.[56] Hypophysectomy of female rhesus monkeys revealed degenerative changes in the gingivae and oral mucous membranes.[73]

In weighing the evidence from hypophysectomy, obviously impossible in human experimentation, we must remember that all pituitary hormones along with the growth hormone are cut off, for instance the thyrotropic, and the effects cannot be attributed to the absence of growth hormone alone.

With puberty activity of the sex hormones inhibits the growth hormone of the pituitary and the period of ac-

tive growth comes to an end. As a result hypopituitarism can no longer alter the masticatory apparatus through the growth phenomena. However, a marked increase in dental caries is said to occur in Simmond's disease.[44] This increase is put down as one of the manifestations of simple inanition, but other factors such as diet, poor hygiene and lack of dental care would have to be ruled out before making such an assumption.

Would the administration of anterior pituitary extract during the period of childhood deficiency help these oral conditions? Schour and Van-Dyke[55] reported that replacement therapy accelerated the delayed eruption of rat incisors caused by hypophysectomy. This could be observed within a week following therapy and continued for about a week following the cessation of therapy, whereas the eruption rate in normal animals was not appreciably altered. Definite stimulation of growth of jaw bone with widening of the arch has been observed in human cases of pituitary hypofunction following similar therapy.[39] However, the time is not at hand to make final decisions in this regard, for one reason the American Medical Association has refused to accept for therapeutic purposes preparations of the anterior lobe.

Hyperfunction of the anterior pituitary in infancy and before six years of age results in a form of giantism in which there is uniform overgrowth of all parts of the body without obesity. The teeth of such people according to Marinus[39] "are unusually strong, even, beautifully spaced and with no evidence of abnormalities". Wolf[11] states "hyperpituitarism in the formative period of life causes abnormally early dentition in contradistinction to the late dentition found in hypopituitarism", and further points out that it commonly exists without giantism as the disturbance is frequently righted before giantism results. The size of the crowns of the teeth and the thickness of enamel and dentine are not affected but since the cementum is capable of growth long after the size of these is established, hypercementosis does occur.[50]

Should *hyperfunction occur after the age of six years and before puberty* a form of juvenile acromegaly results. This is a form of giantism accompanied by overgrowth of the hands and feet as well as the mandible. The prognathic jaw results in malocclusion and spacing of the lower teeth. In addition these is accelerated and supra eruption of the teeth.

Following animal *experimentation* using injections of growth hormone on mice and dogs Downs[20] records "the growth fraction of the hypophysis may accelerate the rate of eruption of the dentition; and owing to increase in the size of the jaw, may also alter the position of the teeth, but in the case of animals having a dyphyodont type of dentition, does not change the size or form of the teeth". Following a series of feedings and a series of injections of pups with pituitary extract, posterior lobe extract, and anterior lobe extract Downs later records[21] "no definite variations in placement, form or texture could be noted in either temporary or developing teeth."

Hyperfunction of the anterior pituitary after puberty and following epiphyseal union results in the much discussed acromegalic. Overgrowth of the soft tissues is marked because the long bones can no longer respond to the growth stimulus. Acromegaly is a definite dental problem because of the oversize of the tongue and the enlargement of the mandible. Some authorities regard the oversized mandible as a direct result of the growth hormone while others attribute it to the mechanical action of the enlarging tongue.[35,48] The acromegalic presents a wide spacing of the lower teeth and a functional occlusion is often entirely lacking. It is claimed that there is a tendency to pocket formation and periodontal infection due to the gums being poorly protected.[40] Most seem agreed that the teeth are usually caries resistant to a very high degree,[11] likely

due to the self-cleaning areas around the teeth. The alert dentist may be the first to suspect acromegaly because spacing of the lower teeth is regarded as an early diagnostic sign.[5,11,48]

The Thyroid

As the anterior pituitary controls the growth of tissues, that is, the increase in the number of cells, so also the thyroid controls the differentiation of tissue or the specialization of cells. Following completion of development thyroxin then influences the rate of living of all cells in the body or metabolism.

We may meet with hyposecretion or hypersecretion of the thyroid and these in infancy, childhood or following maturity. We shall attempt to determine how each is manifest in the mouth, if at all.

Cretinism is the result of hypothyroidism in infancy or during the early years of rapid growth. Because thyroxin is necessary for optimum cellular metabolism its deficiency during these years causes a marked slowing of all growth processes. The cretin is an obese dwarf with retarded mental development, the face is small and bloated, the mouth wide, the tongue large and sometimes protruding.

The literature contains all forms of contradictory statements with regard to the dentition of the cretin. Some claim the tooth structure is defective,[5,10,25,37,39,48] others that it is not.[51] Some maintain the cretin shows widespread incidence of caries,[5,10,25,37,39] others that caries incidence is no more than average.[51,62,40] However, all seem agreed that the shedding of deciduous teeth as well as eruption of the permanent teeth is markedly delayed.[5,10,11,39,40,51] The jaws and face are underdeveloped while the dentition is less affected in size with the result that malocclusion and crowding of the teeth are the rule and the dentition protrusive.[51,11]

All kinds of anomalies are claimed for the cretin including hypoplasia, oversized centrals, undersized laterals and congenital absence of certain teeth.[11,25] One author even attributes the frequent irregularity in size of the teeth of the cretin to the abnormal time of eruption,[39] an obvious case of "post hoc ergo propter hoc."

Hypothyroidism occurring after the period of rapid differentiation but before puberty, approximately between the sixth and twelfth years, does not result in effects as marked as those of the cretin, in fact it is a form of myxedema called juvenile myxedema and is similar except that in addition growth is slowed down. In the adult hypothyroidism causes the familiar myxedema and subjecting oneself to a B.M.R. is quite taken for granted.

The only oral condition definitely associated with myxedema is periodontitis. In a study of eighty patients presenting the dystrophic type of paradentosis made by the Division of Dental Medicine, University of California, 83.75% showed endocrine disturbances, and of these 53.75% suffered from hypothyroidism, 27.50% from hypothyroidism only.[18] Irving[30] presents a classical case of very advanced pyorrhea associated with myxedema cleared up by thyroid therapy alone. Rosenthal[46] reports a summary of nine adult cases of hypothyroidism accompanied by 77% gingival disturbances, there was also a high incidence of caries, 66 2/3% with involvement of the pulps of two or more teeth, root canal therapy failed in each case. Reynolds[43] reports a study of thirty-six cases of paradentosis in which 86% revealed coexistent endocrine disbalance, hypothyroidism predominating with 27.8%.

The association of periodontitic disturbances with hypothyroidism has been explained in several ways such as the poor state of health generally as well as the lowered metabolism of the tissues.[11] Thyroxin is believed to aid resistance to infection and in this way its decrease could predispose to periodontal infection.[5] Among other important changes, hypothyroidism like Vitamin C, causes capillary degeneration and further hypothyroidism was the most common endocrine dysfunc-

tion found in patients with osteoporosis.[17] Probably all the above factors are concerned.

In animal experimentation by thyroidectomy we must remember that interference with the parathyroids often occurs. In monkeys dentine apposition was retarded up to ninety per cent resulting in severe hypoplasia. Enamel formation was also abnormal.[70] Sheep thyroidectomized soon after birth showed delayed eruption and disturbances in jaw development.[64] On the other hand we have the reports of Hammett,[26] in which removal of the thyroid simultaneously with the parathyroids resulted in no change from normal in the incisor teeth of rats, whereas parathyroidectomy alone resulted in serious dental defects.

The availability and ease of administration of thyroxin have done away with the problem of the myxedematous patient. The clinician's responsibility now lies in accurate diagnosis and especially is this true in the cretin where early diagnosis can result in marked improvement: the earlier the treatment the greater the results. Some have said that the dentist can do his share in this regard by picking up cases of cretinism especially in preschool age children. This is true but he must rely upon his knowledge of the systemic manifestations even more than upon the dental symptoms of which the only definite one, I can conclude, is marked delay in eruption.

Hyperthyroidism in infancy or childhood is a rather rare condition and when it occurs is quickly diagnosed and easily corrected by surgery. Thus it does not constitute a dental problem although if allowed to go untreated makes itself manifest in the mouth. The effect is the opposite of that met within the cretin, the deciduous teeth are shed very early (one case at 3½ years reported)[51] with a corresponding eruption in the permanent dentition. A tendency to caries has been claimed in these children, due to the increased demand of the body for nutrition as well as increased calcium excretion,[40] this however appears to be conjecture.

Hyperthyroidism in the adult is most frequently manifest as exophthalmic goitre. It is claimed that in cases of long standing the gingivae become intensely hyperemic and bleed easily.[5] Stevens[58] is impressed with the frequency of dental caries and pyorrhea in patients with hyperthyroidism met with in his medical practice and cites the work of other investigators who made the same observations. He also makes the interesting suggestion that dental foci of infection may precipitate hyperthyroidism in some cases. Becks[13] says "the frequent . . . coexistence of hyperfunction of the thyroid gland and paradental disturbances makes it highly probable that it is aetiologically related to paradentosis." On the other hand another school maintains that periodontitis associated with hyperthyroidism in humans has not been substantiated[51] and it is claimed that thyroid disease in the adult "causes no notable changes in the teeth, jaws or gums".[40]

Animal experimentation by thyroxin injections in rats resulted in accelerated eruption of the teeth,[33] and in thinner labial and lingual walls, wider pulp and greater tooth width, as well as accelerated eruption, but normal calcification and dentine apposition.[28] Accelerated eruption with no modifications in tooth structure has also been reported.[29] In monkeys an increase in the rate of dentine apposition from ten to sixty per cent with normal calcification is reported by Ziskin[70] who concludes that thyroxin is important in the rate of dentine growth and calcification. Periodontal involvement has been produced in guinea pigs following the feeding of large amounts of thyroxin.[8]

The Parathyroids

The relationship of the parathyroids to dental development and oral health has been a very controversial subject. It appears that the role of parathormone is to maintain the blood level of calcium at between nine and eleven

millograms per hundred cubic centimetres. This it does by withdrawing calcium from the skeletal storehouse when necessary. Without becoming involved in the intricacies of calcium metabolism, tied up so intimately with phosphorus and Vitamin D, we will endeavour to determine to what extent hypo or hyperfunction can affect the teeth and bony investing structures.

Hypofunction in the years of infancy when the teeth are being calcified interferes with the deposition of calcium in both enamel and dentine, the result being hypoplasia of these structures.[32,37,45,48,52] The resulting hypoplasia corresponds to the time of parathormone deficiency and is a permanent condition unaltered by return of the gland to normal, or replacement therapy. The eruption of the teeth does not seem to be appreciably altered. We must note however that true parathyroid deficiency in the human during infancy and childhood is rarely encountered.[40]

That hypofunction after the time the teeth are calcified has no effect on the teeth seems to be generally agreed.[45,52] Cases have been cited in which the teeth became extremely loose but remained unaffected themselves, fixation occurring in a few days following large doses of calcium.[40] However some authors still maintain that the teeth themselves are affected. Soffer[57] (1946) says that opaque spots appear on the gingival areas of the teeth, particularly the incisors, and that defective calcification occurs in the dentine and hypoplasia in the enamel. Lankford[36] goes so far as to say "let it be emphasized . . . that by far the greatest cause of caries is insufficiency of the thyroid and parathyroids." It is interesting to note here that patients approaching tetany often complain of paresthesias of the tongue and lips.[57]

Animal experimentation is not too reliable because of the difficulty in removing all parathyroid tissue. Teeth of continuous eruption like rat incisors show pathological opacity, the dentine has a wide dentinoid border and fracture is common, eruption is retarded but not to the extent found in hypophysectomy.[34] Excessive overgrowth, particularly of uppers has been reported.[26] The work of Gies[24] and Hammett[26] is worthy of observation here; repeated thyro-parathyroidectomies on rats had a negative result on the dentition, while the removal of the parathyroids alone resulted in deficient calcification. Similar phenomena have been reported in the submaxillary gland of the rat. Following parathyroidectomy the gland was markedly enlarged with increased salivation, whereas there was no change where a thyroidectomy was carried out at the same time.[27] Gies recommends further research into this phenomena before conclusions are drawn but suggests the possibility that the thyroid and parathyroids are mutually antagonistic in their effect on the dentition, thyroxin tending to deficient calcification, parathormone to excessive calcification.

Hyperfunction of the parathyroids results in the mobilization of calcium from the bones and when it persists a condition known as osteitis fibrosa cystica results. Without describing this condition let it be sufficient to say that the process is most marked at the sites which are most cellular and vascular and one such region is the alveolar process. In fact oral roentgenograms are a valuable aid in diagnosing the early stages of hyperfunction of this gland.[34] As the disease progresses decalcification of the jaws occurs with the formation of multiple cysts, the jaws eventually becoming quite soft with marked loosening of the teeth and malocclusion.[51,75] Epulides of the giant cell variety are common and frequently an early oral manifestation.[34,57]

The teeth themselves being avascular and acellular do not take part in the generalized decalcification[19,37,38,40,48,63] and it has been recorded that in mouths where caries was active the carious process appeared lessened after onset of the disease.[34,52] A distinct disease of the enamel called "enamel dis-

ease" in which it assumes a bluish colour has been associated with hyperparathyroidism.[37] There appears to be no effect on eruption time when associated with children.

Animal experimentation does not entirely agree with the above clinical findings. Work on the continuous erupting incisors of the rat during induced hyperparathyroidism revealed poorly calcified dentine during the rise in serum calcium followed by well or excessive calcification in the period of return to normal serum calcium.[32,49,53] Another reports hypercalcification of the dentine formed during the period of hyperparathyroidism.[52] Others report the occurrence of dental caries in rats subjected to parathorome injections.[14,15]

Despite the evidence to the contrary some authors claim hyperparathyroidism can be a contributing factor in dental caries.[25] One suggests that the resulting altered calcium balance of the mouth fluids and lymph predisposes to dental calcus formation and soft tissue lesions.[22] In closing the subject it should be mentioned that the mechanism of the parathyroids is extremely stable, minor disturbances in function cannot be detected and it has not been proven that it is capable of injury by disease or infection.[39]

The Gonads

Because the gonads differ in children, adult males and adult females it might be wise to consider them under these three headings:

Hypogonadism may be primary or secondary in origin; secondary when the anterior pituitary fails to secrete the gonadotropic hormone. Because the sex hormones initiate closure of the epiphyseal junctions, failure of the onset of puberty is accompanied by a continuation of growth beyond the normal period and an "eunuchoid giant" results.

Hypogonadism is rarely found in the very young but when it does occur there is disagreement as to the effect on the teeth. One school says it is doubtful if the teeth are ever involved and that if the condition occurs after the age of six years they are not affected. They further maintain that the teeth of the eunuchoid giant appear normal in all respects.[51] From the opposing school we read "one of the dental manifestations of hypogonadism is tardy eruption of the teeth[19] and Goldzieher[6] says that in eunuchoid women "the palate is highly arched, the teeth generally well formed, but likely to be crowded. Stunted upper lateral incisors are almost pathognomonic."

There is also controversy about the effects on the jaws; they are said to be massive due to increased bone formation.[51] The eunuchoid is said to be characterized by an undersized lower jaw and small nose.[45] The probability is that the time the condition occurs governs the growth manifestations of the jaws.[39]

Artificial hypogonadism by castration reveals nothing definite. It is said to produce teeth of small size with no histologic changes in rats[5,48] and to have no effect at all in rats.[24,51] Castrated pigs are reported by one to show retardation of the cuspids[51] and by another to show smaller canines.[48] The dentine growth of rhesus monkeys was far more seriously impeded and the gingival reaction more severe following thyroidectomy plus castration than following thyroidectomy alone and estrogenic hormone therapy did not materially improve the condition.[70,75]

Hypergonadism in children results in precocious development and early appearance of the maturation processes. The dentition is also accelerated[5,48] but not to the same degree as other parts of the body, the teeth appearing to lag behind the general developmental process. Otherwise the dentition is unaffected and the jaws appear in harmony with the face.[51]

Artificial hypergonadism by estrogen injections in immatuure mice resulted in bone and growth changes[51] but no changes in the dentition are reported.

Puberty is a period of life brought about by endocrine function in which the gonads play the major role. Oral manifestations associated with this period are increased evidence of caries and gingivitis. It is very reasonable that this caries incidence is coincidental and in no way connected with hormone activity. It is due, at least in part, to the increase in the number of permanent teeth at this time plus the ravages of the previous six years or so that the first permanent teeth have undergone. The increased sex hormone activity during the period may be related to gingival hyperplasia as it is believed to be during pregnancy.[71]

Gonadal dysfunction in adult males does not receive much attention in the literature. One authority claims that gonadal deficiency in the adult causes no notable changes in the teeth, jaws or gums.[40] On the other hand it is said that deficiency in men has resulted in recession of the gum tissue and signs of alveolar atrophy, pyorrhea and bleeding gums.[37] Also gingivitis, pyorrhea and other periodontal conditions in humans have been associated with gonadal disturbances and surgical interference has been followed by cessation of pyorrheal conditions in a few weeks.[48]

Gonadal dysfunction in adult females has been associated by several workers with diseases of the paradentium. Yeretsky[66] reports the case of a patient (age 53) with a previous hysterectomy and removal of one ovary who reported with profuse gingival bleeding. When no local causes were found she was placed on estrogen therapy with prompt recovery. Another (age 28) with a severe periodontal pocket of the diffuse atrophy type, which when no local causes were found, was cleared up following administration of "whole ovary". Following reports of successful topical application of estrogen in a suitable medium to inflamed mucous membranes throughout the body, such as vaginitis and atrophic rhinitis, Ziskin[68] and Yeretsky[66] have reported success in the application of an estrogen containing ointment directly to the gingivae in cases of hyperplasia due to estrogenic dysfunction. VanMinden[65] reports a persistent case of vesicular gingivitis cleared up by similar therapy after other methods had failed.

The menopause is a period closely tied up with gonadal hypofunction and one during which disturbances in the paradentium are very frequent. Although never proven, Yeretsky[66] thinks it plausible that the condition is due to atrophy of the ovary and the resulting imbalance of the pituitary gonadotropic hormones, and Albright[12] further believes that sex hormone imbalance is the most common aetiological factor in osteoporosis because of its large incidence in women following menopause and the beneficial effect following estrogen therapy. Following menopause Wolf[11] feels that the oral condition of women improves generally.

The two periods of menstruation and pregnancy deserve special attention. *Menstruation* has been associated with gingivitis and periodontal disturbances (periodical transitory menogingivitis)[60] (gingivitis dysmenorrhea).[18] Wolf[11] likens menstruation to a miniature pregnancy and the activity of sex hormones at this time may account for accompanying gingival hyperplasia.[71] However, the evidence of a direct relationship is lacking. Apthous stomatitis frequently occurs at menstruation time. In a study of forty-five women subject to cyclic outbreaks Strauss[61] found that outbreaks started sixteen days before menstruation and did not persist into the next menstrual period, two exceptions occurring in women with severe dysmenorrhea. He suggests that anterior pituitary disbalance (via the gonadotropic hormone) was responsible and not the sex hormones and found that Vitamin B1 therapy in all cases gave excellent results.

Pregnancy and lactation and their effects on the teeth have been the subject of much speculation and contro-

versy for many years. All we can include here is the generally accepted opinion today although it is still opposed by some.[42] It is that the incidence of caries is not increased because of the endocrine aspect of pregnancy and there is no calcium withdrawal from the teeth.[5,19,32,48,51] Any apparent increase in caries incidence during this period can be attributed to lack of oral hygiene, lack of dental care and other local factors. It is further maintained that pregnancy appears to have a beneficial effect in preventing caries[23,72] but pre-existing caries may be aggravated.[32]

However there is a high incidence of gingivitis at this period (about 50%)[51] characterized by a hyperemic edematous swelling of the gum tissue particularly around the incisors and cuspids (gingivitis gravidum).[48] The significant change is hyperplasia of the epithelium with progressive loss of the keratin layer as pregnancy advances from the fourth to the ninth month. Experimental injections of rhesus monkeys with sex hormones has produced similar histological changes in the gingivae.[67,68,69,71,73] On the other hand Schour[51] points out that 20 per cent of nongravid women show a similar gingivitis and that much of the remaining thirty per cent can be attributed, as can caries, to faulty oral hygiene and other systemic disturbances. Pregnancy tumours that disappear following parturition are accepted pathology and the lesions have been classified by at least two workers.[5,73]

In conclusion it seems reasonable that the gingival disturbances in women sometimes seen during puberty, menstruation, pregnancy, menopause or gynecological upsets are often interrelated and due to sex hormone activity. The dentist must be aware of this fact because local therapy is often noneffective or gives only temporary relief. They will generally disappear spontaneously at termination of the period concerned.

The Islets Of Langerhans

The Islets of Langerhans in the pancreas secrete insulin, a hormone that regulates carbohydrate and fat metabolism. Its mechanism is not exactly known but it appears necessary for the change over of blood glucose to liver and muscle glycogen. A deficiency of insulin results in the disease known as diabetes mellitus. In diabetes mellitus all metabolic processes seem affected and the tissues generally are more susceptible to infection and the healing process is much delayed.

It is therefore to be expected that the periodontal tissues would be similarly affected. The teeth themselves however are the subject of considerable controversy, some maintaining that the caries incidence is higher[48,52] while others maintain that it is no higher than average[19,41,74] and still others that the caries incidence is less in the diabetic.[5] Some of the disagreement but not all may possibly be attributed to a lack of distinction between controlled, partially controlled and uncontrolled cases.

Without entering into a description of the oral lesions that have been associated with diabetes suffice it to say that every periodontal condition has been described. The significant part is that in the diabetic any infection or lesion is more severe and spreads more rapidly. Periodontal disease in diabetics is the same as in non diabetics except that it appears earlier and progresses more rapidly. "It is the virulence of the gingival abscess rather than the abscess itself which is the result of the diabetes".[41] It is said that sudden loosening of the teeth[5] occurs and by one is said to be an early manifestation.[48] Age must be considered in the periodontal picture because it contributes to the lowering of tissue vitality and resistance[52] but it is not apparently an essential. Rutledge[47] found that eighty per cent of twenty diabetic children (ages 8 to 19 years) he studied showed periodontal disturbances. Fortunately diabetes in children does not seem to affect the development of the teeth or jaws.[74]

Breuer (cited from Becks)[18] suggests

that local factors must be present in the mouth, such as malocclusion, unfavourable contact points, etc., before systemic disorders will result in periodontitis. Becks[13] suggests that the tendency to periodontitis may be due to the diabetic lipemia resulting in an abundance of fatty deposits in the inflamed periodontal tissues. Still others attribute the susceptibility to infection and the rapid bone changes in certain types to the diminished body protein, indicated by the negative nitrogen balance that accompanies acute and uncontrolled cases. Because adequate protein metabolism is necessary for calcium metabolism and transfer via the blood, a resulting disbalance occurs between bone formation and absorption. The depletion of globulin in diabetes may account for the decreased resistance to infection, many immune bodies being gamma globulins.[41]

We must always distinguish between the "uncontrolled" and the "controlled" diabetic, but even with controlled cases there is disagreement. Ziskin et al[76] found gingivae disturbances in all insulin treated members of a "controlled" group and suggest the possibility that insulin itself may be an agent as well as the diabetes. Schour and Massler[32] say "even with only partial control most investigators report no abnormal findings in the periodontal tissues". Perhaps the method of control, whether dietary alone or insulin should also be defined. At any rate today with protamine zinc insulin therapy available diabetic control is more easily maintained and oral diabetic lesions should become less and less frequent.[41]

In a dental discussion of diabetes it is always well to draw attention to the attendant risks of performing oral surgery, even extraction of one tooth, on the uncontrolled diabetic. Even with controlled cases it is recommended that prophylactic chemotherapy be instituted prior to any dental manipulation necessitating opening of tissues.

Hyperinsulinism has not been shown to play any role in dental development or oral health. In any case it is not a serious problem because "less than one hundred cases have been reported in world literature".[5]

The Adrenals

The adrenal glands secrete two hormones, "adrenalin" from the medulla and "cortin" from the cortex. Adrenalin is the great activator of the sympathetic nervous system and "prepares the animal for flight or fight". Cortin is the great sodium chloride regulator of the body; it also co-operates in the development and maintenance of the sex organs and is essential to life.

The dental and oral relations of these hormones, if any, are not fully established and the field is full of speculation and conjecture. Some examples: An oversupply of adrenalin has been associated with serumnal tartar, which does contribute to periodontal disturbances. It is further claimed that patients suffering from serumnal tartar deposits have been completely cured by a pluriglandular preparation after other therapy had failed.[25]

Hyperfunction of the cortex in children has been claimed to result in accelerated dentition and marked dental development, while hypofunction results in a retarded dentition. In the adult loosening of the teeth and alveolar pyorrhea are attributed to disturbed cortical function.[5,48] "Osteoporosis may be associated with tumours of the cortical portion of the adrenal glands.[38] Lankford goes so far as to say "the teeth of the adrenal type are well developed, strong, flinty, inclined to be yellowish in colour, and usually have good resisting power. The size of the canines especially is determined by this secretion . . ."[36]

In opposition to this it is maintained that no effects on the "teeth, jaws or gums" have been demonstrated as resulting from adrenal dysfunction.[37,39,40] Even in pubertas praecox, a rare condition in which cortical hyperfunction results in marked acceleration of bone

growth and epiphyseal closure, no changes in dental development have been observed.[40]

It has also been suggested that adrenal tumours may be responsible for an increased secretion of the gonadal hormones,[10,51] with the attendant changes reported under hypergonadism.

The one definite tie up between the oral cavity and the adrenal cortex is the brown pigmented spots that appear in the mucous membranes in Addison's disease. These vary from light brown to black and often appear in the mouth long before the disease is suspected.[5,11,57] The mechanism of this pigmentation is not well understood, but one theory is that in the accompanying adrenaline deficiency, the adrenaline precursers are accumulated in the skin and mucous membranes and there oxidized to melanin.[2,57] The dental profession must bear in mind that any simple surgical procedure such as the extraction of a tooth may precipitate an adrenal crisis in the untreated patient.[57]

The Thymus

The thymus although included with the ductless glands has no known hormone and recently its status as an endocrine has been seriously quesoned.[48,52] Marinus[39] says that thymus defect is a hypothetical condition and further that its removal from young animals does not interfere in any way with their growth or development. Whether or not it deserves to be called an endocrine there is little evidence to link the thymus in any way with oral health or dental development.

"The typical thymic child shows no characteristic disturbance in development of the teeth or jaws."[39] Thymic hyperplasia in children results in "no effect upon development of the teeth or jaws",[37] although a high irregularly shaped palatal arch has been said to occur.[24] To quote Gies, "We found working on very young white rats, that extirpation of the thymus was without effect on the dentition."

Wolf[10] on the other hand lists no less than ten oral and dental manifestations, all the way from large central incisors to pyorrhea, that may occur as a result of thymic hypertrophy; and Comroe[5] says that thymic hypertrophy may result in large centrals and relatively small lateral incisors.

The Pineal Body

Like the thymus the pineal body has never been proven to have an endocrine function. Tumours of the pineal have been associated with precocious growth and development[37,52] and death often results from pressure effect of the tumour. However, little has been definitely established concerning the gland,[48] and the only commitments are that there is no relation between the pineal and oral health and dental development. "The pineal can obviously play no part in abnormal dental development because even these striking pineal pathologic conditions show perfectly normal teeth".[39] No effect on the teeth is noted except, of course, premature appearance accompanying the precocious development in other parts of the body.[37]

Conclusion

The relation of the endocrines to dental development and oral health is a vast subject, one which is far from being thoroughly explored, and one which if treated adequately would require more space than allotted here. Without doubt, as the mysterious world of endocrinology is penetrated farther and farther, future workers will come to assess its relation to dentistry in a truer perspective.

As can be gathered, thought at the present time is rather muddled, and to draw some safe conclusions embryology and physiology will be of great assistance. With them as a background we can maintain three things, first that endocrine dysfunction can only modify the size and shape of the teeth before completion of the enamel organ; second, that endocrine dysfunction can affect the tooth structure only

before calcification is completed, unless of course it works through the physical environment of the crowns of the teeth, such as saliva; and third, it is possible for endocrine dysfunction to affect the investing structures, bone, pericementum and gingivae at any time.

We can safely say that the enamel organs of all permanent anterior teeth are completed before the first year of life. As a result those changes in size and shape claimed throughout the literature, some of which are even said to be pathognomonic of specific endocrine disturbances, must be looked upon with grave suspicion. Calcification of the permanent teeth is not completed until well into childhood, so that endocrine diseases in the early years can, as in the case of hypoparathyroidism alter tooth structure. However, we can disregard any claims of altered tooth structure when the disease has occurred after completion of calcification.

Applying these observations to caries susceptibility, we can further say that endocrine disturbances can only enter the picture when they alter the physical environment of the crowns of the teeth, as could be effected through a change in the fluids of the mouth. However, it has never been adequately established that endocrine dysfunction will alter the physiology of the mouth to an extent sufficient to raise caries susceptibility. Dental caries, although so universal, seem unnatural to us, and when rampant many look for the explanation in some concomitant or pre-existing unusual condition, whether it be pneumonia, pregnancy, or premature birth. This fallacious reasoning has been carried over into the endocrine field and very often carious teeth are attributed to a co-existing or pre-existing endocrine dysfunction.

The same can be said of periodontal diseases, we must be slow in attributing them to endocrine disturbances. However, in the light of recent investigations a possible relationship may exist and the thorough practitioner must, when local therapy fails, consider the endocrines when searching for a systemic background. So, too, must the orthodontist consider endocrine dysplasias when his problem is concerned with growth phenomena.

The dentist, however, has done his part when he recognizes the possibility of such a disturbance; it is the responsibility of the endocrinologist to conduct the investigation and carry out any indicated therapy. It is only through the co-operation of an alert dental profession and their conscientious medical colleagues that full and lasting oral health will come to all.

BOOKS

1. Best and Taylor, "*Physiological Basis of Medical Practice*," Williams and Wilkins, Baltimore, Fourth Edition, 1945.
2. Boyd, Wm., "*A Textbook of Pathology*", Lea and Febiger, Philadelphia, Fifth Edition, 1947.
3. Brash, J. C., "*The Etiology of Malocclusion*," The Dental Board of the United Kingdom, London, 1929.
4. Cameron, A. T., "*Recent Advances In Endocrinology*," The Blakiston Company, Philadelphia, Fifth Edition, 1945.
5. Comroe, B. I., "*Internal Medicine In Dental Practice*," Page 218, Lea and Febiger, Philadelphia, Second Edition, 1942.
6. Goldzieher, M. A., "*The Endocrine Glands*," D. Appleton-Century Co., New York, London, 1939.
7. Grollman, A., "*Essentials of Endocrinology*", J. Lippincott Co., Philadelphia, London, Montreal, Second Edition, 1947.
8. Thomas, K., "*Oral Pathology*", C. V. Mosby Co., St. Louis, 1944.
9. Werner, A. A., "*Endocrinology*", Lea and Febiger, Philadelphia, Second Edition, 1942.
10. Wolf, W., "*Endocrinology In Modern Practice*". W. B. Saunders Co., Philadelphia, Second Edition, 1939.
11. Idem, "*Oral Manifestations of Endocrine Dysfunction*", Page 640, Chapter 24, "*Oral Diagnosis and Treatment*", *Miller, S. C.*, The Blakiston Co., Toronto, Second Edition, 1946.

JOURNALS

12. Albright, F., Smith, P. H., and Richardson, A. M., "Postmenopausal Osteoporosis", *The Journal of the American Medical Association*, Volume 116, Pages 2465-2474; 1941.
13. Becks, H., "Systemic Background of Paradentosis", *The Journal of the American Dental Association*, Volume 28, Pages 1447-1959; 1941.
14. Blackberg, S. N., and Burke, J. D., "Effects of Parathormone on Dentition of Rats on Normal or Deficient Diets", *The Journal of Dental Research*, Volume 13, Page 225; 1933.
15. Idem, "Influence of Parathormone on the Reduction of Dental Caries in Rats," *The Journal of Dental Research*, Volume 16, Pages 191-201; 1937.
16. Boenheim, F., "Pathogenic Importance of the Endocrine Glands in Parodonal Disease", *The Journal of Dental Research*, Volume 17, Pages 19-25; 1938.
17. Boyens, P. J., "Etiologic Factors in Various Types of Paradentosis", *The Dental Cosmos*, Volume 77, Pages 1-11; 1935.
18. Cohen, M. M., "Clinical Studies of Dental Caries Susceptibility in Young Diabetics", *The Journal of the American Dental Association*, Volume 34, Pages 239-243; 1947.
19. Cross, S., "Endocrines: Their Relation to Orthodontic Diagnosis and Treatment Planning", *The*

American Journal of Orthodontics, Volume 34, Pages 418-440; 1948.
20. Downs, W. J., "The Experimental Study of the Growth Effects of the Hypophysis on the Teeth and Other Tissues and Organs", *The Journal of Dental Research*, Volume 10, Pages 601-654; 1930.
21. Idem, "Studies in the Causes of Dental Anomalies", *The Journal of Dental Research*, Volume 8, Pages 367-378; 1928.
22. Idem, "Observations on the Role of the Endocrines in Dental Development", *The Journal of Dental Research*, Pages 557-560; 1928.
23. Drain, C. L. et al, "Prevention and Control of Dental Caries in Pregnant Mother", *The Journal of Dental Research*, Volume 13, Pages 233-234; 1933.
24. Gies, W. J., "Studies of Internal Secretions in Their Relation to the Development and Condition of the Teeth," *The Dental Cosmos*, Volume 59, Pages 1238-1241; 1917.
25. Glassey, D. W., "A Survey of the Endocrine Problem, with Particular Application in Orthodontics", *The Journal of the Canadian Dental Association*, Volume 5, Pages 444-450; 1939.
26. Hammet, F. S., "Studies of the Thyroid Apparatus VII", *The American Journal of Physiology*, Volume 62, Pages 197-201; 1922.
27. Idem, "Studies of the Thyroid Apparatus VI," *The American Journal of Anatomy*, Volume 31, Pages 103-107; 1922.
28. Herzberg, F. and Schour, I., "Effects of Thyroxine on Rate of Eruption and Dentia Apposition", *The Journal of Dental Research*, Volume 20, Page 276; 1941.
29. Hoskins, M. M., "Effect of Acetyl Thyroxine on Teeth of New Born Rats", *Proceedings of the Society for Experimental Biology and Medicine*, Volume 25, Pages 55-57; 1927.
30. Lewis, A. B., "Oral Manifestations of Endocrine Disturbances-Myxedema", *The Dental Cosmos*, Volume 77, Pages 47-49; 1935.
31. Jackson, A. F., "The Art of Orthodontic Practise", *The American Journal of Orthodontics*, Volume 34 Pages 383-413; 1948.
32. James, J. D., "Dental Caries in Pregnancy", *The Journal of the American Dental Association*, Volume 28, Pages 1857-1862; 1941.
33. Karnofky, D., and Cronkite, E. P., "Effect of Thyroxine on Eruption of Teeth in Newborn Rats", *Proceedings of the Society for Experimental Biology and Medicine*, Volume 40, Pages 568-570; 1939.
34. Keating, F. R., "Hyperparathyroidism", *The American Journal of Orthodontics and Oral Surgery*, Volume 33, Pages 116-128; 1947.
35. Korkhaus, G., "Changes in Form of Jaws and in Position of Teeth Produced by Acromegaly", *The International Journal of Orthodontics*, Volume 19, Pages 160-174; 1933.
36. Lankford, J. S., "The Endocrines and the Teeth". *The International Journal of Orthodontics*, Volume 17, Pages 215-218; 1931.
37. Levy, M. D., "The Influence of the Endocrines on the Teeth and Jaws", *The American Journal of Orthodontics and Oral Surgery*, Volume 26, Pages 671-680; 1940.
38. Lisser, H. and Shepardson, H. C., "The Relation of Endocrinopathies and Calcium Metabolism to Abnormal Conditions of Teeth", *The Dental Cosmos*, Volume 78, Pages 67-73; 1936.
39. Marinus, C. J., "Observations Regarding the Dental Development of Children with Endocrine Disturbances", *The International Journal of Orthodontics*, Volume 20, Pages 229-241; 1934.
40. McCullagh, E. P. and Reoch, C. A., "Some Endocrine Factors in Dental Development and Maintenance", *The Journal of the American Dental Association*, Volume 28, Pages 1436-1446; 1941.
41. Pollock, H., Person, P., Knishkowy; "Oral Lesions Seen in Diabetes Mellitus", *Journal of Periodontology*, Volume 18, Pages 155-158; 1947.
42. Reed, C. B., "The Mouth In Pregnancy", *The Journal of the American Dental Association*, Volume 20, Pages 1631-1638; 1933.
43. Reynolds, R. A., "Relationship Between Endocrine Dysfunction and Paradental Disease, "*The Journal of the American Dental Association*, Volume 20, Pages 1850-1858; 1933.
44. Richardson, H. B., "Simmond's Disease and Anorexia Nervosa", *Archives of Internal Medicine*, Volume 63, Pages 1-28; 1939.
45. Rony, H. R., "Endocrine Glands and Dentistry," *The Journal of the American Dental Association*, Volume, Pages 1651-1659; 1934.
46. Rosenthal, L., "The Effects of Systemic Disturbances Upon the Dental Tissues, II, Hypothyroidism", *The Journal of the Canadian Dental Association*, Volume 5, Pages 555-557; 1939.
47. Rutledge, C. E., "Oral and Roentgenographic Aspects of the Teeth and Jaws of Juvenile Diabetics", *The Journal of the American Dental Association*, Volume 21, Pages 322-328; 1934.
48. Schour, I., "Endocrines and Teeth", *The Journal of the American Dental Association*, Volume 21, Pages 322-328; 1934.
49. Schour, I., and Ham, A. W., "Effect of Single Dose of Ergosterol or Parathormone on Histologic Structure of Dentin of Rat Incisor, Correlated with Blood Calcium Findings", *The Journal of Dental Research*, Volume 13, Page 194; 1933.
50. Schour, I., and Massler M., "Endocrines and Dentistry", *The Journal of the American Dental Association*, Volume 30; Pages 595-603, 1943.
51. Schour, I., and Massler, M. "Ibid", Pages 763-773.
52. Schour, I., and Massler, M., "Ibid", Pages 943-950.
53. Schour, I., Tweedy, W. R., and McJunkin, F. A., "Effect of Experimental Hyperparathyroidism on the Incisor of the Rat", *Proceedings of the Society for Experimental Biology and Medicine*, Volume 31, Pages 517-518; 1933-34.
54. Schour, I., and VanDyke, H. B., "Changes in the Teeth Following Hypophysectomy", *The American Journal of Anatomy*, Volume 50, Page 397; 1932.
55. Idem, "Effect of Replacement Therapy on Eruption of the Incisor of the Hypophysectomized Rat", *Proceedings of the Society for Experimental Biology and Medicine*, Volume 29, Pages 378-382; 1932.
56. Idem, "Effect of Hypophysectomy on the Molar of the Rat", *Proceedings of the Society for Experimental Biology and Medicine*, Volume 29, Page 688; 1932.
57. Soffer, L. J., "Oral Manifestations of Endocrine Disease", *Annals of Dentistry*, Volume 5, Pages 34-40; 1946.
58. Stevens, C. A., "Relationship of Dentistry to Peptic Ulcer and Goitre", *The Journal of the American Dental Association*, Volume 28, Pages 404-407; 1941.
59. Stever, I. L., "Effects of True Infantilism on the Jaws and Teeth", A Case Report, *The Journal of the American Dental Association*, Volume 16, Pages 1304-1306; 1929.
60. Stoloff, C. I., "Periodic Transitory Menogingitis Incidental in Women", *The Journal of Dental Research*, Volume 13, Page 190; 1933.
61. Strauss, K., "Vitamin B^1 Therapy in Cyclic Habitual Aphthous Stomatitis in Women", *British Dental Journal*, Volume 83, Pages 77-80; 1947.
62. Taylor, G. L. and Appleton, J. L. T., "Dental Aspect of Case of Dwarfism (Cretinism?)" *Dental Cosmos*, Volume 71, Page 124; 1929.
63. Thoms, K. H., "Hyperparathyroidism; Effect on Tooth Development", *The Journal of Dental Research*, Volume 13, Page 250; 1933.
64. Todd, T. W., and Wharton, R. E., "Effect of Thyroid Deficiency Upon Skull Growth in Sheep", *The American Journal of Anatomy*, Volume 55, Pages 95-116; 1934.
65. Van Minden, F., "Use of Female Sex Hormone in the Treatment of Chronic Desquamative Gingivitis", *The Journal of the American Dental Association*, Volume 33, Pages 1294-1297; 1946.
66. Yeretsky, W., "Gingivitis: Its Causes and Treatment", *The Journal of the American Dental Association*, Volume 30, Pages 729-737; 1943.
67. Ziskin, D. E., "Effects of Certain Hormones on Gingival and Oral Mucous Membranes",*The Journal of the American Dental Association*, Volume 25, Page 422; 1938.
68. Idem, "The Effect of Hormonal Treatment on the Gums and Oral Mucosa of Women", *The Journal of Dental Research*, Volume 16, Pages 367-378; 1937.
69. Idem. "Effects of Male Sex Hormone on Gingival and Oral Mucous Membranes", *The Journal of Dental Research*, Volume 20, Pages 419-423; 1941.
70. Ziskin, D. E., and Applebaum, E., "Effects of Thyroidectomy and Thyroid Stimulation on Growing Permanent Dentition of Rhesus Monkeys", *The Journal of Dental Research*, Volume 20, Page 21; 1941.
71. Ziskin, D. E., and Blackberg, S. N., "Experimental Study of Gingivae During Pregnancy", *The Journal of Dental Research*, Volume 13, Page 190; 1933.
72. Ziskin, D. E., and Hotelling, H., "Effects of Pregnancy Mouth Acidity, and Age on Dental Caries"

The Journal of Dental Research, Volume 16, Pages 507-519; 1937.
73. Ziskin, D. E., and Nesse, G. J., "Pregnancy Gingivitis; History, Classification, Etiology", *The American Journal of Orthodontics and Oral Surgery*, Volume 32, Pages 390-429; 1946.
74. Ziskin, D. E., and Siegel, E. H., "Clinical Roentgenological and Histological Studies of Teeth and Gingivae of Diabetic Children or Adults", *The Journal of Dental Research*, Volume 21, Pages 296-297; 1942.
75. Ziskin, D. E., and Stein, G., "The Gingivae and Oral Mucous Membranes of Monkeys in Experimental Hypothyroidism", *The Journal of Dental Research*, Volume 21, Page 292; 1942.
76. Ziskin, D. E., Laughlin, W. C., Siegel, E. H., "Diabetics in Relation to Certain Oral and Systemic Problems Part II", *The American Journal of Orthodontics and Oral Surgery*, Volume 30, Pages 758-774; 1944.

ANNOUNCEMENTS

Montreal Dental Club Annual Fall Clinic

The 25th Annual Fall Clinic under the auspices of The Montreal Dental Club will be held at the Mount Royal Hotel, October 19-21, 1949. Special arrangements are being made to suitably commemorate this Silver Anniversary of the inauguration of this annual event.

Among those who have accepted invitations to appear on the program are:

Dr. R. O. Schlosser, Chicago — who will conduct the progressive clinic on "Immediate Complete Denture Prosthesis."
Dr. R. J. Godfrey, Toronto—"Partial Dentures."
Dr. J. P. Coupland, Ottawa—"Radiographic Technique."
Dr. J. D. Gage, Cleveland—"Use of Diamond Points."
Lt. J. R. Conant, D.C., U.S.N., Bethesda—"Periodontia."
Dr. J. A. Salzmann, New York—"Preventative Orthodontics."

M. L. Donigan, Director,
1414 Drummond St., Montreal, Que.

Toronto Academy of Dentistry

The **Annual dinner** meeting will be held at the Royal York Hotel on October 17 at 7 p.m.
Speaker—Mr. Gratton O'Leary.
First stated meeting will be held on November 10 at the Royal Ontario Museum.
Speaker—Dr. Harold Hillenbrand—Secretary, American Dental Association.
Winter Clinic will be held in the Royal York Hotel on November 24.
Feature of the meeting will be a symposium—"Habits in Relation to Mouth Health."
Speakers—Dr. Harry Ebbs, Dr. W. E. Blatz, Dr. S. A. MacGregor,
Dr. W. A. Hawke, Dr. Armitage Cox and Dr. Byron Hughes.

Chicago Dental Society

The eighty-fifth Midwinter Meeting of the Chicago Dental Society will be held February 6-9, 1950 at the Stevens Hotel, Chicago.

A full program of essays, limited attendance clinics, table clinics and motion pictures will be presented.

A.D.A. Annual Session

The 90th annual session of the American Dental Association will be held Oct. 17 to 20 at San Francisco.

Steal a few extra days and visit the state in which exists nearly every combination and extreme of topography, climate, soil, mineral, plant and animal life in the United States.

They that give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety.—Benjamin Franklin

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Foolish he who for the world would change a faithful friend.—Euripides.

ANNOUNCEMENTS

University of Toronto, Faculty of Dentistry

CONTINUATION COURSES FOR GRADUATES IN DENTISTRY

The Faculty of Dentistry, University of Toronto announces a series of short intensive courses for dentists during the 1949-50 session. These courses will be arranged and conducted by the staff of the Faculty of Dentistry with the co-operation and financial support of the W. K. Kellogg Foundation of Battle Creek, Michigan. When deemed advisable, outstanding visitors will be included among the lecturers and clinicians.

These courses will be designed to provide the general practitioner with an opportunity to keep abreast of standard methods and procedures of practice, to become informed respecting the most recent developments within the profession. Instruction will be given through lectures, seminars, and clinical demonstrations. No instruments or equipment will be required of those who enrol in any of the classes.

Applied Anatomy for Dentists: Wednesday, September 14, Friday, September 16, 1949, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 6.

Periodontia: Monday, September 26, Friday, September 30, 1949, (inclusive) 9.00 a.m.-500 p.m. Enrolment limit, 14.

Dental Public Health Conference: Thursday, November 10, Saturday, November 12, 1949, (inclusive) 9.00 a.m.-5.00 p.m. Saturday, 12 noon. No enrolment limit.

Endodontia: Monday, December 5, Friday December 9, 1949, (inclusive) 9.00 a.m. 5.00 p.m. Enrolment limit 8.

Operative Dentistry: Monday, February 13, Friday, February, 17, 1950, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 10.

Radiography: Monday, February 27, Friday, March 3, 1950, (inclusive) 9.00-5.00 p.m. Enrolment limit 18.

Partial Denture Prosthesis: Monday, March 6, Friday, March 10, 1950, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 10.

Crown and Bridge Prosthesis: Monday, March 27, Friday, March 31, 1950, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 8.

Orthodontics: Monday, April 17, Friday, April 21, 1950, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 10.

Minor Dental Surgery: Monday, April 17, Friday, April 21, 1950, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 12.

Pedodontia: Monday, April 24, Friday, April 28, 1950, (inclusive) 9.00 a.m.-5.00 p.m. Enrolment limit 14.

DENTAL PUBLIC HEALTH CONFERENCE — NOV. 10, 11, 12, 1949

This conference is planned by the Department of Dental Public Health at the Faculty of Dentistry for all those actively engaged in dental public health work, either full or part-time.

Round-table conferences will be held on matters related to field work and it is hoped that any field work or administrative problems may be presented and freely discussed.

Dr. E. W. McHenry, Professor of Public Health Nutrition, and Research Member of the Connaught Medical Research Laboratories, and Mr. D. B. W. Reid, Associate Professor of Biometrics and Research Assistant at the Connaught Medical Laboratories will take part in the program. Heads of departments at the Faculty of Dentistry will be available during the conference when any subjects related to that department are being considered.

Dr. Harold Hillenbrand, Secretary of the American Dental Association who will speak at the Toronto Academy meeting, November 10th, will meet this group during the session.

The conference is under the direction of Dr. Glenn T. Mitton, head of the department and is being presented as a service to public health workers. No enrolment limit or tuition fee has been set for this session's conference. Registration for the conference is necessary and should be made through the Dean's office not later than November 1, 1949.

Continuation Course for Graduates

ENDODONTIA

December 5-9, 1949 (inclusive) 9.00 a.m.-5.00 p.m.

The course will include diseases of the pulp, diagnosis of pulp disease, pulp protection, pulpotomy, pulpectomy, therapy as applied to the pulpless tooth, obliteration of root canals in anterior and posterior teeth, root resection, bleached discolored teeth, consideration of systemic diseases in relation to focal infection.

The course will be under the general direction of Dr. G. C. Hare.

Enrolment limit 8.

Those interested in any of these courses are asked to inquire respecting enrolment.

Please address inquiries to:
The Dean, Faculty of Dentistry, University of Toronto,
230 College Street, Toronto, Ontario.

The Forum

ORAL CANCER—THE SURGEON'S RESPONSIBILITY

Condensed from Editorial in Jour. of Oral Surg., April, 1949

Although early mouth cancer seldom causes distressing symptoms its presence in an easily accessible, highly sensitive region should command immediate attention from the patient and the dentist. In no other part of the body is such an opportunity offered for early detection.

Because of the close proximity of the lesions to the teeth, many patients logically first consult with their dentist. Dr. Hayes Martin points out that 60% of all patients, in a large series, with cancer of the gingiva consulted a dentist first. From 20 to 39 per cent of the patients with cancer in other parts of the mouth first consulted a dentist. Many of these patients owe their lives to the alert observations and early attentions of the dentist who made the diagnosis or referred them to a physician for diagnosis and treatment.

In all patients more than 40 years of age the oral surgeon should think first of cancer. In all patients less than 40 he should think of cancer too. Cancer of the mouth, because of the ease of clinical inspection and palpation, is not difficult to detect.

In general the treatment of oral cancer, except in the hands of a few highly trained individuals, is not a problem for the oral surgeon. The removal or correction of areas of chronic irritation, infection, and carious teeth should precede any form of treatment. Good oral care is imperative.

If the treatment involves the use of irradiation lead screen appliances should be constructed for the protection of uninvolved tissues. If the irradiation must involve bone in which teeth are present all of the teeth, regardless of their condition, must be extracted and the soft tissue over the alveolus be permitted to heal before treatment is undertaken. Irradiation of segments of the jaws containing teeth predisposes to disintegration of tooth structure, irradiation necrosis or osteomyelitis of the partially devitalized bone.

A word of caution regarding the extraction of teeth in previously irradiated areas is in order. Quiescent areas irradiated years previously may be opened to uncontrolled infection by a simple extraction. Conservatism in management of this type of case may save the patient extreme suffering and the surgeon considerable embarrassment.

The following rules should be kept in mind regarding all oral lesions: (1) have all abnormal tissues removed from the mouth examined by a competent pathologist; (2) in all patients more than 40 years of age consider the lesion cancerous until it is proved otherwise; (3) in patients less than 40 consider cancer in the differential diagnosis; (4) excise and examine microscopically all small suspicious lesions for biopsy; (6) extract all teeth from regions to receive intensive irradiation treatment; (7) exercise extreme caution in the surgical treatment of any previously irradiated bony area.

Saddle your dreams before you ride 'em.—Mary Webb

BOBBY-PIN DESTRUCTION of the Incisal Edges of Upper Anterior Teeth

by WALTER COGSWELL, D.D.S., Kansas City

Reprinted from Dental Digest, August, 1947

Many dentists have recognized, no doubt, that notches on the incisal edges and angles of upper anterior teeth are injuries resulting from the repeated use of these teeth as convenient means of opening "bobby pins." We have arbitrarily called these abrasions "Bobby-pin notches."

The frequency with which such abrasions were observed in our private practice, and the increased destruction and disfigurement which appeared with the advance in age (namely, from about the fifteenth to the twenty-fifth year), led us to make several group examinations to augment office findings. By conducting such examinations, it was believed that a more accurate picture could be obtained of what actually occurred to cause such damage. (The patient was apt to attribute the notches to some unknown blow which resulted in an ordinary fracture of the edge or corner of the tooth.)

Group Examinations

The procedure of study was as follows:

Students representative of a cross-section of our community, in training in business or professional courses, were chosen. Their average age was nineteen years and four months. These students met in groups, were told the purpose of the meeting, and were asked a given set of questions.

Group Responses

Individual patients are apt to deny using their teeth for opening bobby pins; we found that when young women were questioned in groups, they did not hesitate to respond in the affirmative by raising their hands. More than 80 per cent admitted repeated use of their teeth in bobby-pin opening.

Of those denying the habit, many were unable to demonstrate the opening of a pin with one hand while holding a lock of hair in position with the other, without involuntarily putting the pin in their mouth.

The universal answer to the question of why they persisted in using the teeth in opening bobby pins was this: When holding a lock of hair in position with one hand, they had no other means of opening the pin with the free hand alone; also, that when opening the pin with the fingernails, they either tore the nail badly or scratched the nail lacquer and polish. (Many seemed more concerned with this latter type of damage than with the abrasion of the teeth.)

Many girls admitted that after long use the pins lost their spring tension, maintained by the curved form at the base or bend of the pin, and that they were in the habit of biting that portion of the pin together to cause the legs of the pin to close more tightly. This habit further damaged the teeth already weakened by the bobby-pin abrasion.

Clinical Observations on Teeth

Examination of the upper anterior teeth disclosed that three-fourths of those admitting the habit (or 60 per cent of the total examined) had marked damage to one or more teeth, principally the upper central and lateral incisors. Few cuspids were involved. Nearly all of the remaining teeth showed the beginning of incisal damage.

In recording the findings of these examinations, recognition was given to actual fracture by other means—any abrasions attributable to other causes such as: thread-biting or opening and closing safety pins, traumatic occlusions, and hypoplasia. However, it was found in many instances that minor fractures of incisal areas by other means were further aggravated by

catching the tip of the pin in the convenient notch so provided. Multiple notches were common. Apparently a shifting to another point of fulcrum, because of traumatic periodontal irritation from continual use of one or two teeth, accounted for these.

Process of Destruction

The constant minute chipping and abrasion which the pin accomplishes remains unnoticed in many cases until the incisal portion of the tooth is fractured and the notch becomes visible on the labial surface, or until the tongue detects the fracture.

The notch first appears as a glazed concavity of the inner margin of the incisal edge. This concavity then enlarges, extending well up the lingual surface of the crown of the tooth. As the destruction continues and the concavity deepens and enlarges, the incisal edge becomes thinner and thinner. Suddenly it fractures, and a deep notch becomes visible from the labial aspect. This is also true of the incisal angles of two teeth when that point is used as the fulcrum.

Causes of Variations in Notch Forms

Flexibility of Pin—It is believed that different flexibilities in pins may be responsible for different forms of notches. The longer tine of the pin contacts the tooth and, with an extremely flexible tine, the tip rotates and the sharp corner becomes a more vicious cutting implement. The thicker and more tense spring enforces a straighter forward pull to spread the pin and the tip crosses the incisal edge in a flatter position.

Accuracy of Placement — Marked variations in the accuracy of placing the pins on the teeth are shown by different girls. Many return the pin each time to the same point on the lingual of the incisal edge, usually in the center of the tooth or between two teeth. Others vary the position slightly, producing a jagged abrasion. Accurate placement produces a round or square notch just the width of the pin.

Types of Notches

No attempt has been made here to classify these notches except for descriptive purposes in this article.

A patient was handed a bobby pin and asked to arrange a lock of hair held with her left hand by opening the pin held in her right hand and placing it in her hair. From the observations of the procedure, the following deductions were made:

1. The incisal abrasion is a rounded notch extending well up on the lingual surface of a fairly thick left central tooth. This type of notch is the result of pulling the bobby pin straight forward at the same point on the incisal edge each time the pin is used.

THE EFFECT OF TOPICAL APPLICATIONS OF POTASSIUM FLUORIDE AND OF THE INGESTION OF TABLETS CONTAINING SODIUM FLUORIDE ON THE INCIDENCE OF DENTAL CARIES

by H. H. STONES, M.D., M.D.S., F.D.S.R.C.S., F. E. LAWTON, B.D.S., F.D.S.R.C.S., E. R. BRANSBY, Ph.D., and H. O. HARTLEY, Ph.D.

Conclusions of paper in Br. D. Jour., June 3, 1949.

A two years' study was made in the National Children's Home at Frodsham of the effect on the incidence of dental caries of (a) a topically applied 2 per cent solution of potassium fluoride, and (b) of the ingestion of tablets containing sodium fluoride. Eight applications of the fluoride solution were made at three-monthly intervals during the period September 1944 to September 1946. One tablet of sodium fluoride was given daily to provide 1.5 mg. of fluorine, the amount which it was estimated would, on the average, be contained in the volume of water normally drunk, if the fluorine

content was approximately 1.2 p.p.m. About 250 children aged 3-14 years were included in the study. The fluorine investigation was preceded by a two years' period of observation on various dental conditions.

There were four experimental groups randomly selected:

(I) Control group, that is, receiving no topical applications nor tablets of sodium fluoride.

(II) Group receiving tablets of sodium fluoride.

(III) Group having potassium fluoride topically applied to the teeth of the two left quadrants of the mouth, the right quadrants being unpainted.

(IV) Group receiving both the tablets as in (II) and topical applications as in (III).

There were in addition to (1) two further control groups, namely, the right quadrants which were unpainted of the groups (III) and (IV) above.

Chemical analysis of the water supply of the Home showed that its fluorine content was negligible; analysis of sample diets eaten by the children at three periods showed that the average daily intakes were 1.0, 0.8 and 0.7 mg. of fluorine.

The only significant finding was a reduction in the incidence of new caries among boys in the group receiving a tablet of sodium fluoride. There was no similar reduction for the group which had both the topical applications and the tablets nor for the girls of either group. The topical applications alone had no significant effect. The reduction of the incidence of new caries among boys due to the tablet must be considered as tentative and inconclusive.

It is suggested that the reason for such negative results with topical application may be the pH of the solution, the method of application, the period between the applications, or—and this also applies to the group taking tablets—the fact that the children lived in an institution, and that they have a low initial incidence of caries and a low annual rate of increase in caries.

FOCAL INFECTION AND ENDOGENOUS OCULAR DISEASE

by MELVIN W. McGEHEE, M.D.

Summary of paper in W. Virginia D. Jour., April 1949.

1. It is true that improvements in intraocular disease have been reported following removal of dental infection, and have been seen to occur clinically in our own patients. There is no way of proving that the focus which has been removed was related to the intraocular disease. The improvement might have occurred even if the focus had been entirely ignored.

2. American ophthalmologists are beginning to question the blind acceptance of the theory of focal infection. Nevertheless, this doctrine, correctly or incorrectly, continues to perch smugly on its pinnacle in somewhat dilapidated raiment.

3. Devoid of their teeth, stripped of their tonsils, often the victim of numerous colonic irrigations, abdominal and genito-urinary operations, the patient finally is reduced to only those organs necessary for existence, meanwhile his intraocular disease progresses remorselessly to absolute blindness.

4. Finally, bare of its unnecessary accoutrements, stands the theory of focal infection. All the actual evidence in favour of the theory as herein set forth is totally clinical, largely suggestive, and circumstantial. Its complete acceptance must be largely on faith. From a practical viewpoint, to de-foci a patient is justifiable. There is, however, no place in modern medicine or dentistry for the routine removal of minor and symptomless foci of infection as a cure-all for endogenous ocular disease.

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Editorial

C.D.A. POLICY

In these days when the professions all over the world are facing problems of great import, problems which strike at the very root of our beloved profession it behooves every one of us to study carefully the policies laid down by the Canadian Dental Association and give those programs all the support possible. If one is not in agreement then the provincial C.D.A. governor should be interviewed re the matter so that we can have the greatest possible measure of unity.

The Canadian Medical Association having realized that the trend of events is unquestionably towards some form of government control of medical services has decided what it wants and at the Saskatoon meeting held in June, formulated a policy. A statement of that policy is as follows:

1. "The Canadian Medical Association, recognizing that health is an important element in human happiness, reaffirms its willingness in the public interest to consider any proposals, official or unofficial, which are genuinely aimed at the health of the people.

2. "Among the factors essential to the people's health are adequate nutrition, good housing and environmental conditions generally, facilities for education, recreation and leisure; and not least, wise and sensible conduct of the individual and his acceptance of personal responsibility.

3. "It is recognized and accepted that the community's responsibility in the field of health includes responsibility not only for a high level of environmental conditions and an efficient preventive service, but a responsibility for ensuring that adequate medical facilities are available to every member of the community, whether or not he can afford the full cost.

4. "Accordingly, the Canadian Medical Association will gladly co-operate in the preparation of detailed schemes which have as their object the removal of any barriers which exist between the people and the medical services they need and which respect the essential principles of the profession.

5. "The Canadian Medical Association hopes that the provincial surveys now being conducted will provide information likely to be of value in the elaboration of detailed schemes.

6. "The Canadian Medical Association, having approved the adoption of the principle of health insurance, and having seen demonstrated the practical application of this principle in the establishment of voluntary prepaid medical care plans, now proposes:

(a) "The establishment and/or extension of these plans to cover Canada.

(b) "The right of every Canadian citizen to insure under these plans.

(c) "The provision by the State of the health insurance premium, in whole or in part, for those persons who are adjudged to be unable to provide these premiums for themselves.

7. "Additional services should come into existence by stages, the first and most urgent stage being the meeting of the costs of hospitalization for every citizen of Canada. The basic part of the cost should be met by individual contribution, the responsible governmental body bearing, in whole or in part, the cost for those persons who are unable to provide the contribution for themselves."

One will observe that the medical profession is willing to consider any proposal which is aimed at the health of the people; however there may be a great divergence of opinion as to how the health of the people can best be safeguarded.

Medical care and also dental care will not accomplish very much if adequate nutrition, housing, environmental conditions etc. are overlooked.

It will be noted that the medical plan calls for a *voluntary* prepaid medical care and not a *compulsory* plan, that every Canadian citizen can insure under the plan, that the State will pay in whole or in part the health insurance premiums for those who are unable to provide the premiums themselves. That means that if one is able to provide the premiums and does not wish to join the scheme that it is not compulsory for him to do so.

To apply these principles to dentistry at the present time is very difficult as we have no well developed voluntary dental health program functioning.

The C.D.A. at its annual meeting in Saskatoon adopted a plan for dental health service whereby the Government would pay certain funds to the provincial legal bodies who in turn would administer these funds to provide a basic dental health maintenance service. This plan is already working successfully in a small way in the province of Alberta. Whether or not it will work out advantageously on a larger scale if adopted remains to be seen. However under this plan presumably all the citizens of Canada would be taxed for the purpose and it would not be on a voluntary basis as proposed by our medical confrerès.

Obviously the medical plan of voluntary participation has many great advantages and it would seem wise for us as dentists to at least institute a series of experimental programs in selected communities. Such programs should include the study of various types of voluntary prepayment plans for all ages, also part-payment programs. The field is large, the results far-reaching and much is at stake.

M.H.G.

BOOK REVIEW

Blakiston's New Gould Medical Dictionary, 1294 Pages. Price $8.50. Blakiston Publishers, 105 Bond St., Toronto.

A new medical dictionary has been published rather than a revision of a former one which is an event worthy of note. Many new and valuable features are to be found in this new publication.

Approximately 100 authorities, representative of medicine, dentistry, pharmacy, nursing, and the basic sciences, collaborated in the scientific work to produce this volume. The dictionary contains many improved features, including modern pronunciation, cross references, and sub-entries, so arranged that the required information is available in one place. A large number of excellent plates appear in the volume.

The great increase in new terms and definitions, during recent years, has made a new medical dictionary necessary. A careful search proves that it would be difficult to discover omission of new words in this dictionary.

Such a monumental work in producing a dictionary in recognizable, scholarly form will be well received, and form a most valuable reference work for both practitioner and student.

DON W. GULLETT

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A Text Book of Oral Pathology by Thomas J. Hill, D.D.S., Professor of Clinical Oral Pathology and Therapeutics, Western Reserve University, Cleveland, Ohio. Fourth Edition, Thoroughly Revised with 314 Engravings. 398 Pages. Published by the Macmillan Company of Canada, St. Martin's House, Toronto 2, Ontario. Price $8.45.

The fourth edition of this fine textbook has been made in order to bring to date the content of the third edition and in doing so the author has drawn liberally on the resources and facilities of the Institute of Pathology and School of Dentistry of Western Reserve University.

Much new material has been added, especially in the chapter on dental caries which deals with aetiology, formation of acids, conditions which influence caries activity, the resistance of the tooth, predisposing factors, and control action of fluorides.

Other subjects dealt with are "Abnormalities" "Hypoplasia", "Organic and Inorganic Accretions", "Abrasion and Erosion", "Diseases of Pulp", "Periapical Diseases", "Gingivitis", "Periodontal Disease", "Deep Neck Infections", "Stomatitis", "Focal Infection", and "Progressive Tissue Changes."

The author states that this book is primarily for use in teaching dental students but this reviewer believes that it should prove most helpful to the practising dentist.

M. H. G.

ROYAL CANADIAN DENTAL CORPS NEWS

Major L. A. L. Millar has been posted to The RCDC School, Ottawa, Ont. as a member of the staff. Major Millar recently returned from Bethesda, Md., where he completed the General Post-Graduate Course at the U.S. Naval Dental School, following which he completed an Observership Course at Cancer Memorial Hospital, New York City.

Dr. J. R. M. Gourdeau of Quebec City has recently been appointed to The Royal Canadian Dental Corps in the rank of Captain. Captain Gourdeau received his early education at Quebec City, received the degree of B.A. from Levis College in 1945 and the degree of D.D.S. from the University of Montreal this Spring. He has been posted to No. 12 Coy RCDC (RCN) and is residing with his wife at Halifax, N.S.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

George M. Dewis—Representative For Nova Scotia

Dr. G. M. Dewis has been appointed representative to the Board of Governors for Nova Scotia, replacing the late Dr. V. D. Crowe.

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Nova Scotia Takes Action on Grant

At the annual meeting of the Nova Scotia Dental Association the following resolution was passed:

> "That the annual dues to the Nova Scotia Dental Association be raised from $15.00 to $30.00, $20.00 of which shall be payable to the Canadian Dental Association."

The action is effective for the year 1950.

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Function of Education Program for Dental Hygienists

"On July 2, 1949, the Council on Dental Education of the American Dental Association in Chicago adopted a definition of the function of dental hygiene education, as follows:

> The prime function of the dental hygienist is to assist the members of the dental profession in providing oral health care to the public. She may apply her knowledge and skills either in the office of the private practitioner, or in formal health educational activities in schools or other agencies. In either instance, she can and should perform an important function in health education.
>
> The intra-oral operations performed by the dental hygienist shall be limited to the natural and restored surfaces of the crowns of the teeth beginning at the epithelial attachment; in no circumstances shall she attempt to treat pathologic involvements of the crowns of the teeth or of the supporting and adjacent tissues.
>
> At the discretion of the dentist, the dental hygienist may be required to perform other important office duties for which her training in the hygienist school may have prepared her.
>
> The present two-year course seems adequate to prepare the dental hygienist to perform the tasks that may be assigned to her in the private dental office. When employed, however, by a school system or any other agency, she should be required to extend her education to qualify her to assume such responsibilities."

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Definition of Dentistry

"At the 37th annual session of the Federation Dentaire Internationale in Milan, May 30-June 4 last, the Hygiene Commission adopted a definition of what is generally called 'dentistry':

> Dentistry is the health service specifically concerned with the establishment, maintenance, restoration and improvement of the health, function and appearance of the oral cavity and its associated parts in their relationship with the individual as a whole.
>
> This includes the recognition of the oral signs of systemic diseases, the prevention and treatment of oral diseases, injuries, malformations and deficiencies; the repair of teeth when damaged by accident or disease, and their replacement when lost.
>
> The field of dentistry, then, is comparable with the field of ophthalmology, laryngology, otology and dermatology; and its social importance and opportunities are at least as great.
>
> It is, therefore, reasonable to define dentistry as 'odonto-stomatology, branch of medicine.'"

NEWS FROM THE PROVINCES

BRITISH COLUMBIA

Vancouver and District Dental Society

The Vancouver and District Dental Society starts the year with an outstanding program lined up for the first two meetings.

Doctor Herman Becks, who holds both medical and dental degrees, and is Professor of Dental Medicine at the University of California, will address an afternoon session on "Oral Diagnosis" and an evening session on "Diet, in Relation to Caries Control". Doctor Becks is a staff member of the George William Hooper Foundation for Medical Research, of the University of California, and he is well known throughout the country for his contributions to the study of diet, in the control of dental caries, in particular.

For the next meeting, Doctor Jack Werner,

Professor of Dental Prosthesis of the College of Physicians and Surgeons, of San Francisco, will be the clinician and speaker. In the afternoon of the day of his visit, he will present a working clinic, carrying through a full mandibular and maxillary impression technique. In the evening, he will speak on "Present Day Concepts of Full Denture Prosthesis."

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Telephone Course

Sixty-seven dentists of Vancouver and vicinity have signified their intention of taking in the telephone course being sent out from the University of Illinois during the coming winter. As far as is known at the present time, Vancouver is the only Canadian city to take part in this almost continent wide hook up. The series of lectures are to be sent out once each month, by telephone, and those who have been chosen to present the lectures are men who have made, and are making a great contribution in their own specialty. The experiment will be watched with great interest.

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Dental Health

Recent months have shown that the Provincial Department of Health and Welfare of British Columbia is more than willing to cooperate with the British Columbia Dental Association, in outlining plans for dental health, and dental education in this province. A strong dental health committee of the Association has been working with the department in outlining dental health services for communities which have been denied such services. A newly formed public relations committee of the Association will unite with representatives of the Department of Health and Welfare, and with the Department of Education, in preparing literature for the instruction of public health officers, nurses, and teachers; and booklets, radio presentations, moving pictures and lectures for the general public.

One of British Columbia's dental health service problems, probably not quite equalled in any other part of the Dominion, is the long, fiord-like western coast line, extending from the 49th parallel to Alaska. This area, often thought of as all waste land, intolerant of settlers or any form of permanent residents, offers a surprise to those who travel through its thousands of miles of inland waterways. Instead of the expected bleak, unpopulated forbidding coast lines, the visitor often finds, in the most unexpected places, small but flourishing communities of dozens, or even hundreds of permanent residents. In fact, there would seem to be few sheltered coves that are entirely devoid of population. On the larger islands, even well north of the populated areas of the mainland, one may find lumbering and fishing communities of several hundreds, with schools operating normally, but with little in the way of health services. Investigations of the committees of the British Columbia Dental Association, it is hoped, may result in the establishment of some form of regular dental service to such areas.

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Okanagan Valley Meeting

The first meeting of the season in the Okanagan Valley will be held at Vernon, when the Interior Dental Society meets. It is reported that Doctor Alec Gunning, of Victoria, will present a clinic on "Gold Inlays" as the feature item of the program and no doubt some of the members of the Society will present clinics on various subjects.

ALBERTA

Golf at Edmonton

Fifty one members of the Edmonton and District Dental Society met at the Golf and Country Club on August 18. Dr. George Brass was the star of the afternoon taking first prize for two birdies on the first nine. The low gross prize winner was Dr. Frank Cleall. The winning team was composed of Dr. Moriss Wright and Bill Stevens. The best dressed golfer was Dr. Stan Hodgson. Dr. Ken McMurchy was presented with a "special" prize of two golf balls.

Following dinner prizes were given to the best story-teller. Dr. Bill Murray won first prize for his story of "The Community Chest" and second prize went to Dr. George Brass for his story entitled "The Sandbay Handicap." Dr. Harold Knight presided.

ONTARIO

Dr. Harvey Reid Honoured

On the occasion of the annual meeting of the Faculty of Dental Surgery of the Royal College of Surgeons of England on 15th July,

FELLOWSHIP CONFERRED ON DR. HARVEY REID

Left to right: Dr. Harvey W. Reid, Dr. Robert Bradlaw, Dean of the Faculty of Dental Surgery, Royal College of Surgeons of England and Sir Cecil Wakeley, President, Royal College of Surgeons of England.

Dr. Harvey Reid, Dr. Kurt Thoma of Harvard University, Dean Freeman of North Western University, Dr. E. Lapira of the Royal University of Malta and Dr. F. M. Watry, Secretary General of the International Dental Federation, were admitted to the Fellowship in Dental Surgery by the President, Sir Cecil Wakeley K.B.E., C.B. Presenting Dr. Reid, the Dean of the Faculty of Dental Surgery, Dr. R. Bradlaw said:

'Dr. Harvey Wilson Reid graduated thirty-two years ago with the degree of Doctor of Dental Surgery of the University of Toronto. After serving with distinction in the Canadian Dental Corps in the first World War, he returned to Ontario where he has devoted many years to the advancement of dental surgery. He has been in no small measure responsible for improving standards of dental education and licensure and his influence in developing the dental services and health legislation in Canada has been considerable. His wide experience and deep interest in higher education have been recognized by the University of Toronto by his appointment to membership of Senate while the high regard of his professional colleagues is evidenced by his election to the Presidency of the Toronto Academy of Dentistry, of the Canadian Dental Association and more recently his tenure of office as President of the Royal College of Dental Surgeons of Ontario, one of the oldest dental Licensing Bodies in the world. In honouring his distinguished services to dental surgery, we wish also to bind more strongly the ties of affection and regard which link us with our colleagues in the Dominion.'

At the Annual Dinner which followed, at which the newly admitted Fellows and their ladies were guests of honour, other distinguished guests included the President of the Royal College of Surgeons of England, the Senior Vice President, Sir Harry Platt, Lord and Lady Webb-Johnson, The Dean of the Faculty of Anaesthetists, the Chief Medical Officer and Principal Dental Officer of the Ministry of Health, Mr. J. Farrar Brown, Secretary of the Nuffield Foundation, Dr. E. W. Fish, Chairman of the Dental Board of the United Kingdom, Mr. John Baird M.P., Lieutenant Colonel J. L. Bernier of the United States Army Institute of Pathology, the

Director of the Royal Army Dental Corps, Major-General H. Higgins, the Director of the Dental Branch of the Royal Air Force, Air Commodore G. Ballantyne, Mr. D. S. Middleton of the Royal College of Surgeons of Edinburgh, Brigadier-General Ehsan of the Egyptian Army. Dr. A. S. Ghosh, Vice-Principal of Calcutta Dental College, Dr. N. Suttill of the British Council and the Deans and Directors of the Dental Schools of Guy's Hospital, the Royal Dental Hospital, University College Hospital, King's College Hospital, Sheffield, Leeds, Manchester and Durham Universities.

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Correction

In the September issue the date of the Dental Curling Bonspiel at Brampton was given as December 12. It should be December 14.

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Northern Ontario Dental Convention

This Association held its annual meeting at the Empire Hotel in North Bay on Saturday, September 10. President Dr. Ralph Foster ably assisted by Secretary Dr. Art. Torrance had a program arranged in keeping with the finest traditions of this Society. There were about 50 members and visitors present and nearly all were accompanied by their ladies to add charm and a social touch to proceedings.

Dr. Douglas Tanner, University of Toronto opened the program by presenting a splendid lecture, "X ray and Dental Surgery." Dr. Tanner in a quiet pleasing manner shared a part of his store of knowledge and in masterly fashion he got his message over in a very simple way. He spoke of the newer treatment of infections including the use of penicillin. He emphasized that in giving this drug, the dose should be sufficiently large to be effective and suggested the use of "Crystalline Procaine Penicillin G in Peanut oil," given in a dosage of 300,000 units intra-muscularly. He suggested also that people were malignancy conscious these days and that it was a good thing when removing suspicious abnormal tissue to have a biopsy done. It could be sent to the Faculty of Dentistry for examination and report. Dr. Tanner demonstrated by radiograph slides many pathologic conditions occurring in the mouth, indicated differential diagnosis and suggested methods of surgical treatment.

This lecture was followed by a luncheon at which many guests spoke briefly—Dr. R. P. Lowery, Vice President, Canadian Dental Association, Dr. Lloyd Grose, President, Ontario Dental Association, Dr. Bruce Sutherland, Sudbury, Dr. Honey, Welland, Dr. Marshall, Toronto and Dr. Phillips, Oshawa.

Dr. Phillips reviewed current problems under discussion before the Board of the Royal College of Dental Surgeons of Ontario of which body he is chairman. His comments concerning Dental Health services were of especial interest as he outlined a plan already in operation in the Province of Alberta. The plan is set up for welfare recipients of the Province and it has been in operation for over 2 years. Under this plan the Alberta government makes monthly payments to the Alberta Dental Association (Provincial legal body) on a per capita basis for each recipient. The dental association in turn makes payment to the dentists of the Province on a fee schedule basis. The dentists of Alberta like the plan because of the fee schedule basis and the government is pleased because they say they cannot administer it as cheaply as the dental legal body.

The government allows 26½ cents per month per capita relief recipient and the patient goes to the Dentist of his choice. Fees allowed correspond quite closely to the D.V.A. schedule and payment of accounts are made three days following receipt of statement. In case of denture service the patient pays one half the cost which prevents individuals from throwing away old dentures to get new ones.

The Canadian Dental Association at its annual meeting at Saskatoon in June went on record as favouring this type of dental health service plan for any government contemplating a treatment service.

The following resolution was passed endorsing a submission of the health insurance committee.

Whereas the first duty of a provincial legal body is to protect the public and ensure satisfactory dental health service, and

Whereas the Provincial dental legal body has disciplinary powers, and

Whereas the profession has demonstrated its ability to administer a dental service, and

Whereas in our opinion a dental health service can be administrated more efficiently and economically by the profession therefore be it resolved that this Board of Governors recommends that in a Federal Government

sponsored plan for dental health care the method of payment be on a per capita basis from the Government payable to the dental legal body of each Province who shall administer these funds to provide a basic dental health maintenance service.

Dr. Phillips indicated that a sum of $100,000.00 was set in the last budget of the Ontario government for dental relief but up to the present it was not yet available.

In the afternoon session of the Convention, Dr. O. D. Legge, Sudbury, presented a discussion describing his technique for obtaining centric and functional bite relations in dental prosthodontics and transferring these to an articulator. Dr. Legge demonstrated an instrument of his own design to assist in the technique.

At the President's dinner with more than one hundred dentists, their ladies and friends in attendance, Dr. "Vin" Keenan gave an entertaining after dinner speech entitled "Ireland and the Irish."

Other entertainment included a singsong, instrumental and vocal music, a feature of which were a few impromptu numbers by Dr. and Mrs. Archie Boyd of Kirkland Lake. These two talented artists are always good for a couple of numbers with lots of pep.

The meeting ended with a dance at the Golf Club, but it was noted many sort of side-tracked this closing function as they had already had a big day.

The new officers of the Society are—
President, Dr. V. S. Fournier, Sudbury
Vice President, Dr. I. T. Brill, Timmins
Secretary-Treasurer, Dr. A. R. Kaukinen, Sudbury.

MANITOBA

Shortage of Dentists

On August 14, 1949 the Dental Public Health Committee of the Manitoba Dental Association sent the following letter to all dentists in the province: "Our Director of Dental Services with the Manitoba Government has expressed to your Dental Public Health Committee the necessity of further contribution of services by profession at large.

By way of explanation the amount of Dentistry required in those areas served by the Department is much greater than can be coped with by the present facilities of manpower.

Appreciating that these requirements must be met, one way or another, your Committee felt that a request should be made to obtain additional operators from our practising dentists.

While the remuneration of twenty-five dollars per day would not recompense for the loss of time and cover over-head in most cases, the appeal is made not on a financial basis, but rather that the needy children be served and at the same time we safeguard the Profession of Dentistry by having them served by qualified, licensed practitioners.

If you would be willing to give one or two days a year to this end would you kindly submit your name to this Committee, together with advice as to what notice you would require to accommodate your appointments.

This request is presented in the hope that adequate support may be given to maintain our status quo without the necessity of further appointments being made by our Government at the present time.

Thanking you."

EMPIRE NEWS

B.D.A. Presidential Address

by J.M. MACRAE, F.D.S.R.C.S. Eng. L.D.S. Leeds.

Condensed from Br. D. Journal, July 1, 1949

The general impression created by the first year's working of the National Health Service Act must, I think, be regarded as one of wasted opportunities and misdirected effort.

The first effect of the scheme was, indeed, a sudden demand for the so-called "free" dental treatment and, as a result, the dental profession had, with difficulty, to adapt itself to this sudden popularity of dentistry. Practitioners up and down the country, by extending their working hours and those of their staffs, endeavoured, with some measure of success, to meet the emergency. Many members indeed accepted the challenge and sacrificed their leisure and, in some instances, their health, in the endeavour to fulfil the obligation of the profession to relieve suffering and assist in the creation and maintenance of dental health among their patients.

What was the result? By working long hours increased incomes have been earned. It

might reasonably have been thought that the example thus set to the community would have received general praise from a Government which has repeatedly urged the nation at large to remove all restrictive practices and to increase production in every possible way.

This would surely have been logical but it failed to appeal to the Minister of Health. His main concern throughout seems to have been not the provision of treatment wherever possible but the discovery of a way of escape from the dilemma created by himself and his advisers and the total inadequacy of the financial provisions which they had made.

Faced with this position, the Minister, rather than admit so serious an error on his part, adopted methods unpleasantly suggestive of those countries which we are apt to consider less democratic and less civilized than our own. By dint of persistent emphasis on the large gross earnings of a minority of the profession, with little or no mention of the large practice expenses, a belief was fostered that all dentists were earning fabulous incomes by exploiting the Health Service. Having created this biased and unfair picture, the Minister proceeded to reduce the earnings, first by an arbitrary "cut" of one-half of all sums earned in excess of £400 in any one month, and subsequently by a second and equally arbitrary "cut" in the scale of fees equivalent to a 20 per cent reduction.

Instead of making provision for the co-ordination of the priority services with the general dental service, nothing at all was even attempted in this direction. As a result many school dental officers have felt it impossible to remain in the service and have transferred to private practice. This has still further reduced the efficiency of a service which has never been adequately manned, has placed additional and unreasonable burdens upon those who have remained in the service and has, in all parts of the country, so reduced the facilities for the dental treatment of the school and pre-school child that the name "priority service" has become so inappropriate as to be almost a contradiction in terms.

The failure to foresee the possibility of this position arising, and to take adequate steps to prevent such a catastrophe is tragic.

In all fairness I think the following should be said.

First of all it is manifestly true that many who have been in need of treatment for years have been able to obtain it under the Health Service and have, in fact, secured a measure of oral health which must, in the long run, react to their general well-being. It is, of course, true that much of the work which has had to be done has been more in the nature of a "break-down service" than of a true health service. Nevertheless the fact that we, as a profession, have been able to treat more patients than ever before must have resulted in some good which should be recognized.

Secondly it must be admitted that many of the profession have—at the cost of much hard work—secured more adequate incomes than ever before and that the scale of fees for treatment under the National Health Service gave greater encouragement to conservative treatment than ever before. This makes it more than ever to be regretted that the recent ill-advised tampering with the scale of fees has largely discounted the wise provisions of last year.

Thirdly the unprecendented demand for dental treatment has materially assisted the young practitioners and those entering the profession to establish themselves in practice with, at least, less of the hazards and worries which have traditionally beset the man who "puts up his plate" and waits for patients.

The future of the National Health Service depends, I think, on two factors, both of which are almost impossible to estimate. The first is the ability and willingness of the country to continue to finance this tremendous experiment in social service even on a modified scale. The second, and less easily calculable, is the ability of the Minister to show a new sense of reality and statesmanship. An attempt to continue the National Dental Service in its present form must, in my view, lead ultimately to disaster. It will inevitably result in an increase, rather than a diminution, of the cost of the scheme and in the creation of a frustrated, suspicious and discontented profession.

Is it not possible, even at this late date, for the Minister to show a new willingness to reconsider the whole problem?

GREAT BRITAIN

Progress

One of the disadvantages that is inherent in a State Dental scheme is that any new material must be regarded with suspicion by the

State, and a brake is thus put upon initiative and progress. It is left to the private practitioner to persevere in the use of new materials until in time they are considered good enough to be used in the State Service. The Standing Advisory Dental Committees, which were set up under the Act, have advised their respective Ministers against the use of acrylic materials for inlays, and it is certainly not our purpose to argue here the merits and demerits of acrylic inlays. The Department of Health for Scotland has very properly decided to consult the profession about the advice that it has received before taking any action. In England, however, no such consultations have taken place, and the Minister of Health has imposed an immediate ban on the use of acrylic inlays. Such action can only be regarded as an arbitrary interference with the clinical freedom of the profession, but it is doubtless not the last such interference that the profession will have to accept. The technique adopted by the Minister to enforce his ban should also be noted by the profession. A change in the Regulations is involved, and if it disagreed with the decision, the profession would at least have the nominal remedy of trying to get a prayer laid in the House against the new Regulation. Apparently it is not convenient to alter the Regulations at the moment, so the Minister proposes to enforce his ban by instructing the Dental Estimates Board to refuse approval of all estimates for acrylic inlays, thus leaving the profession without any remedy at all if it disagrees with the Minister's decision.—Br. D. Jour., August 19, 1949.

In order to show that the State Service is not entirely unprogressive, the Minister has decided, again on the advice of his Standing Advisory Dental Committee, to permit the use of diatoric upper front teeth with plastic dentures where artificial gum is present. Now here indeed is dentistry progressing—if only towards a further reduction in the denture fee.

GENERAL NEWS

11th International Dental Congress Planned in London

Plans for the 11th International Dental Congress to be held in London, England, were advanced recently when it was decided to conduct the program during the week starting July 20, 1952.

Plans also call for ten scientific sections which will feature internationally known experts in various fields of dentistry. The papers are to be published in 1951 in the new International Dental Journal in an effort to inform in advance those who may attend. Open discussion of the papers is planned.

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Hearst Publishing Company Sued by Medical Researchers

Two million-dollar libel suits against the Chicago *Herald-American* and the Hearst Publishing Company, ardent supporters of antivivisection, have been filed in federal court by two medical research scientists. Their suits are being backed by the National Society for Medical Research.

N. R. Brewer, of the University of Chicago, charges in his suit that the newspaper referred to him as a "torturer," a "cruel experimenter" and a "sadist." He asks "punitive and compensatory" damages. The newspaper in the other suit is charged with malicious misrepresentation of the views of Virgil H. Moon, of Wake Forest school of medicine, on animal experimentation. His complaint alleges that the newspaper quoted him as stating that the medical profession indulges in "useless dog torture."

In commenting on the suits, Anton J. Carlson, president and co-founder with Andrew C. Ivy of the N.S.M.R., said that they represent the beginning of "fight fire with fire" policy. A nation-wide legal committee has been organized by the Society to help protect the medical worker.—Jour. A.D.A.

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Denmark and Norway

"Both Norway and Denmark have solved the problem of nation-wide medical insurance with a maximum of coverage and a minimum of red tape. Every family whose total income is less than $2,000 a year is automatically covered. Families with an income above $2,000 a year are eligible for the insurance

plan but pay premiums graduated according to the benefits required. The poorest family gets the same prompt and adequate attention that is received by members of richer families. The plan has been in operation in both countries for upward of fifteen years and apparently is universally satisfactory.

"Here is how it works in Denmark: Every family takes out a policy in one of the five or six officially recognized health-insurance companies, which are privately owned and operated. The penalty for not having a policy is to deny members of the family the benefits of old-age pensions and unemployment compensation. When a doctor is called, the family simply gives him the number of its policy and he sends his bill to the insurance company. Doctors' fees are fixed by a national commission on which the doctors, the insurance companies and the Government are all represented. The same plan is followed when a person goes to a hospital. The hospital collects from the insurance company.

"Under this plan each family can select its own doctor and neither the patient nor the doctor has any red-tape contacts with the Government. The Government regulates the plan but does not administer it. A modified plan applies to dental service, except that patients are not entitled to free dentures. To discourage abuse of so-called free medical service, the patient pays 25 per cent of the cost of medicine and 25 per cent of the cost of glasses, dentures and other medical supplies. The insurance companies and the Government divide 75 per cent of the cost.

"This plan varies slightly in Norway, where the patient pays the doctor direct and then—using the doctor's bill as a receipt—collects from a Government-operated insurance company. In Norway, the patient pays 10 per cent of the doctor's fee, but all hospital service is free. However, the patient pays the entire cost of medicine and supplies. The same plan applies for dental service, except that dentures and expensive bridgework are not covered by the insurance. Norwegians pay a slightly higher insurance fee than the Danes, but in both countries the cost for families with incomes of less than $2,000 is very small—amounting to less than $20 a year for the average family.

"In Denmark and Norway, the Governments make sure that every family with an income of less than $2,000 is covered and that the fees are reasonable. But they keep their hands off the administration of the plan. They make no effort to dictate to either patient or doctor. In Britain the Government runs the whole show."

"Nordic Health Aid Avoids Red Tape," *New York Times* 98:28 *May* 8, 1949—per Public Health Economics.

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Cost of Medical Care

One of the big arguments for government medicine is that the cost of medical care has risen disproportionately with average incomes. A look at the record, however, suggests that some of the statements we have taken for granted need looking into.

The increase in the cost of hospital care is a case in point. It has increased, to be sure—six times since 1900. But points out Dr. Nathaniel Faxon, director of Massachusetts General Hospital, "There has been an almost identical increase in individual income with which to meet this expense." Faxon suggests we take a look at some of the ways the average American spends his income. So here's a table with a few enlightening comparisons (based on 1946 statistics):

	In Millions	Per Person
Liquor	$8,770	$62.10
Tobacco	3,411	24.36
Patent medicines, drugs	1,500	10.71
Movies	1,250	9.82
Cosmetics	1,164	8.30
Night Clubs	1,000	7.14
Four major sports	800	5.71
HOSPITAL CARE	648	4.36

As long as this country can afford to spend so much for liquor, tobacco, etc., and so little for hospital care, it can hardly be argued that this kind of medical care costs so much we must fall back on government subsidies. Diverting just a fraction of the money which now goes for hooch into hospital funds would produce amazing results.

Editorial, "Hospitals vs. Hooch," Minneapolis Star 71:20 June 3, 1949 per Public Health Economics.

IN MEMORIAM

Frederick George Hughes of Waterloo, Ontario, died on July 24 at the age of 79 years.

Dr. Hughes graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1894. Soon after graduation he began his practice in Waterloo where he had continued actively until his retirement this year. As he had been practising for fifty years he was granted an honourary membership in the Royal College of Dental surgeons at the Spring session of the Board this year.

Dr. Hughes was active in civic affairs and a member of the Park and Cemetery Board for 35 years. He was a keen curler and in 1944 he was made an honourary life member of the Ontario Curling Association. He was a member of the Waterloo Curling Club and the Granite Curling Club of Kitchener.

Dr. Hughes is survived by his widow, two sons and one daughter.

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William Corbett Kennedy of Orillia, Ontario, died on February 5 at the age of 77 years.

Dr. Kennedy was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1895. After graduation he began to practice in Orillia where he continued until his death.

He was granted honourary life membership of the Royal College of Dental Surgeons in 1941 having completed 50 years of active dental practice in Ontario.

He served as a member of Orillia Board of Education during the years of 1930-1940.

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Fred Moffatt of Winnipeg, Manitoba, aged 66, died suddenly August 24.

He was a member of Northern Light Lodge No. 10 A.F. and A.M. He was also a member of the Scottish Rite of Free Masonry and the Khartum Temple of the Shrine. A masonic service was held at the grave.

Dr. Moffatt is survived by a sister and a brother.

Charles E. Pearson aged 76, died at his home August 28 following a prolonged illness.

He was graduated from the University of Toronto 45 years ago and succeeded his father the late Nathaniel Pearson in the practice of dentistry. In 1939 in recognition of his contribution to the profession he was elected an honorary life member of the Academy of Dentistry of Toronto. Dr. Pearson won recognition for his sculpture, especially bronzes of eminent dental practitioners which are on display in the University of Toronto and the University of Chicago.

He was a charter member of the Canadian Club and a former member of the Rosedale and Lambton Golf Clubs. He was also a keen gardener.

Dr. Pearson is survived by his widow and two sons, C. Gordon Pearson, D.D.S. and John G. L. Pearson, Ph.D.

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Hatton Alexander Robertson of Hamilton died on August 20 at the age of 72 years.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1904. He immediately began his practice in Hamilton where he continued until his death.

Dr. Robertson was a charter member of Hamilton Kiwanis and a past president of the club. He was a member of the Burlington Golf and Country Club, the Hamilton Golf and Country Club and a past master of Doric Lodge A.F. and A.M.

He is survived by his widow, one son and three daughters.

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John Howard Still of Sudbury, Ontario, died August 13. He was graduated from the University of Toronto in 1915 and since then practised in Sudbury until last April when he had to retire on account of ill health.

He was an active member of the Sudbury Curling Club. He was a past master of Nickel Lodge No. 427 A.F. and A.M. and was also a member of Tuscon Chapter No. 95 G.R.C.

Dr. Still is survived by his widow, one son, a daughter and a sister.

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Le dentier immédiat sous ses différents aspects*

par ROBERT CHENEVERT, D.D.S., Montréal

Je suis heureux de l'occasion, qu'on me donne, de discuter avec vous d'un sujet qui m'est cher, puisque, depuis plusieurs années, je travaille au développement de cette technique, qui consiste dans la pose immédiate de la pièce de prothèse après l'extraction des dents.

J'ai lu et relu à plusieurs reprises à peu près tous les articles, qui ont paru sur ce sujet, depuis une trentaine d'années. J'ai pu constater ce qui avait été obtenu de bon et de mauvais, en utilisant telle ou telle autre méthode. Il est possible en utilisant les expériences des autres, de sauver des étapes et d'éviter bien des échecs.

Comme vous le savez, avec cette technique, les dentiers sont faits avant l'extraction des dents, et les nouvelles dents sont adaptées en place dans la même visite, où les dents sont extraites. Personne voit le patient sans dents, éliminant ainsi cette période humiliante, où il doit rester édenté. On peut ainsi éviter les contacts avec le public avec des joues creuses, des lèvres enfoncées, une figure défaite. Avec cette technique, il n'y a pas de changement dans l'apparence de la figure. La forme des dents, leur grosseur, leur couleur et leur position sont maintenues et l'esthétique de la figure conserve son harmonie. Pas de perte de temps; les relations sociales peuvent être maintenues immédiatement et les relations d'affaires, dans une journée ou deux. Les patients peuvent mastiquer dans un temps très court, ce qui est une protection pour leur santé.

Toutes les personnes ne se prêtent pas également à ce travail de dentier immédiat. Lorsque un tel service est décidé, après l'examen du cas particulier, l'intérêt augmente également chez le patient, comme chez le dentiste. Le patient, qui bénéficie d'une pièce de prothèse immédiate, n'a pas à subir de douleur ou très peu de douleur et voici pourquoi: il y a un fait physiologique bien connu, qui veut que, lorsqu'un massage léger est maintenu autour d'un organe blessé, qu'une guérison sans douleur et sans inflammation se produise. Avec le dentier immédiat le procès alvéolaire, le périoste et la muqueuse ont immédiatement du travail à faire. En opposant les forces de la mastication, il se produit une contre-force égale, ce qui est établi par la 3ième loi de mécanique de Newton. Cette action et réaction préviennent la stagnation et la congestion, maintenant ainsi la fonction normale, essentielle et prodigant la vitalité voulue pour prévenir l'infection.

Lorsque les dents du haut et du bas viennent en contact, une pression est transmise sur les gencives et les alvéoles. Cette pression se produit à chaque fois que le patient avale. Cette pression intermittante stimule la guérison avec le minimum d'atrophie des tissus. Le patient

*Conférence prononcée à la Société Dentaire de Montréal, en mai 1949.

est surpris agréablement par cette sensation d'analgésie, produite par ce massage involontaire.

Le retard que les patients apportent à faire enlever des dents infectées, est souvent occasionné par l'humiliation à la pensée d'être vu sans dents. Cette émotion devient souvent une obsession et l'emporte sur le bon jugement; et les foyers d'infection sont tolérés pendant des mois et des années, bien que les patients sachent que ces foyers d'infection sont une menace pour leur santé.

Le fait que la transition se fait dans un temps très court, sans perte de temps ou avec une très courte absence, solutionne bien des problèmes. Durant cette courte transition le patient souffre très peu, et développe aucune mauvaise habitude de mastication. Une autre inquiétude du patient est la crainte que son apparence soit modifiée avec ses nouvelles dents. Son moral deviendra meilleur lorsqu'il saura qu'aucun changement sera apporté à son esthétique, que le modéle, que nous avons en mains, nous permettra de reproduire assez fidèlement tous les détails des anciennes dents, et que les relations des mâchoires avec le contour de la figure seront les mêmes. A moins que, du consentement du patient, certains changements soient faits pour améliorer l'articulation ou l'apparence.

La condition physique, le tempérament et l'âge du patient sont les premières considérations à faire pour décider de la possibilité de faire une pièce immédiate. La résistance, la tolérance et un bon moral sont essentiels, que le patient soit jeune ou moins jeune. La coopération est plus complète cependant chez les jeunes.

Des radiographies doivent être prises, non seulement des dents restantes mais aussi des tissus où les dents ont été extraites, afin d'étudier la forme des racines, la condition et la densité de l'alvéole. Des foyers d'infection, des fragments de racines et des dents incluses sont de temps à autre découverts dans les gencives édentées. La grosseur et la relation du sinus maxillaire par rapport à la crête des gencives doivent être aussi observées. Ces recherches ont encore plus d'importance, si on doit modifier la tubérosité pour augmenter la dimension verticale dans la région des molaires.

Notre travail de dentier immédiat ne s'opère pas toujours dans les conditions les meilleures; nous avons malheureusement trop souvent à surmonter des défectuosités de bouche et je vais vous en donner quelques exemples:

Dans le maxillaire nous rencontrons fréquemment des anomalies à la tubérosité qui ne nous permettent pas d'étendre notre pièce jusqu'à la limite normale de la mâchoire; elles désorganisent en plus l'occlusion, ne laissant pas, dans plusieurs cas, l'espace intermaxillaire suffisant pour pouvoir placer des molaires sur nos dentiers.

Nous rencontrons également des excroissances osseuses exagérées dans la partie antérieure des alvéoles, qui peuvent être assez volumineuses pour causer une défectuosité majeure dans la relation des mâchoires et présenter un problème pour l'esthétique. Dans la voûte palatine, on rencontre des excroissances osseuses, qui varient d'une élévation mineure, jusqu'à une forme de fuseau ou une forme de lancette, pouvant occuper jusqu'aux 2/3 du palais, et pouvant nuire considérablement à l'adaptation du dentier.

Dans la mandibule, on rencontre sur les parties linguales ou buccales des crêtes, des excroissances osseuses appelées "torus mandibularis," qui causent également des complications dans la construction de nos pièces. On rencontre en plus l'attachement anormal des muscles, qui vont jusqu'au sommet des crêtes. Il y a aussi de gros muscles fibreux, qui comprennent le frein labial, qui s'étend jusqu'au sommet des gencives, et parfois jusqu'à la partie linguale du palais, et nuit à la rétention du dentier. Il y a aussi l'alvéolectomie recommandée par certains auteurs, mais que je ne recommande pas, excepté toutefois dans des cas exceptionnellement spéciaux.

Toutes les anomalies, que je viens d'énumérer, peuvent être corrigées ou opérées dans la même visite, où se font les extractions des dents, qui se trouve en même temps la même visite où nous posons nos dentiers immédiats. Par conséquent dans la même visite, les anomalies

sont corrigées, les dents sont extraites, les nouvelles dents sont mises en place, l'esthétique est rétablie et le patient repart avec ses nouvelles dents et se sent assez bien.

Les tissus vont guérir rapidement, puisque la base du dentier va maintenir le caillôt, va préserver la propreté des tissus et va hâter la guérison des gencives. Dans peu de jours le patient pourra faire face à ses affaires, il sera habitué avec ses nouvelles dents et personne ne l'aura vu sans dents.

L'effet de l'esthétique, l'efficacité du fonctionnement, et le confort qu'on peut obtenir d'une pièce immédiate, sont en proportion directe avec la forme anatomique, et la qualité des tissus mous et durs des crêtes des gencives, et aussi en proportion directe avec la relation des mâchoires.

Beaucoup de précautions doivent être prises en tout temps, avant de faire les extractions des dents. Les gencives enflammées doivent être traitées, et les dents avec des épaisses couches de tartre doivent être grattées, surtout lorsqu'il s'agit de faire des dentiers immédiats.

Un saignement excessif, à la suite des extractions des dents, est assez fréquent, parfois sérieux, et nécessite souvent une intervention urgente.

La compréhension et le maniement de l'hémorragie nécessitent une connaissance adéquate de son étiologie.

Les causes qui prédisposent à l'hémorragie provenant du système organique peuvent être énumérées comme suit: L'anémie, l'avitaminose, l'hémophilie, l'hypertension, leucémie et purpura. Les causes locales sont la congestion capillaire, le déchirement ou la coupure de petites vénules ou artérioles ou encore des blessures aux vaisseaux, veines ou artères.

Parmi les interventions à faire contre l'hémorragie, il y a dans certains cas le pansement avec pression. Dans les cas d'anémie, il y a l'alimentation au foie ou à l'extrait de foie, l'administration de calcium et l'absorption de vitamines C & K. Dans les cas pernicieux, il y a la transfusion. Dans les cas d'hémophilie, le patient doit être préparé soigneusement par un médecin.

La condition physique du patient, sa résistance et sa tolérance à l'infection présente doivent être soigneusement déterminées, avant de faire des extractions multiples et des opérations chirurgicales. Un historique complet doit être obtenu et quelques fois un examen par un médecin, y compris l'analyse du sang et de l'urine, si necessaire. Une médication, une diète et un choix de vitamines sont recommandés, avant de faire des opérations chirurgicales, dans la bouche comme dans d'autres parties du système. Quoique l'infection de la bouche est la cause apparente d'un déséquilibre dans le système, il est important que la résistance du patient soit remontée, avant d'enlever les dents infectées, de faire des opérations pour des conditions pathologiques ou des conditions chirurgicales.

Je me permettrai de vous faire une petite observation sur l'historique des cas, qui devrait occuper une place très importante dans tous les examens dentaires et qui est malheureusement négligé. Ceci n'est pas attribué entièrement à la négligence de la part du dentiste, mais plutôt à son manque d'entraînement ou à sa mauvaise préparation à faire cet historique.

Les écoles dentaires sont pour une bonne part responsables de cette situation en ne donnant pas aux élèves l'entraînement nécessaire à cette fin. Pour longtemps encore, l'historique restera le point le plus faible du diagnostic. Heureusement plusieurs dentistes, qui ont continué à étudier et à lire, ont reconnu la place importante que l'historique doit occuper dans le diagnostic, et lui donnent une place de plus en plus importante dans l'examen de leurs patients.

L'historique nous permettra souvent de découvrir des maladies ou des anomalies qui sont plus importantes que les causes qui avaient poussé le patient à venir nous voir. Cet historique nous guidera dans notre traitement et nous évitera des erreurs.

Notre opinion finale sera basée sur l'ensemble des renseignements que nous aurons obtenues par tous les moyens à notre disposition. Plus nos recherches seront méticuleuses, plus notre opinion sera précise, plus nos traitements chirur-

gicaux seront couronnés de succès. Prenons par exemple l'excroissance à la voûte palatine. Avant d'y faire une intervention quelle qu'elle soit, on doit s'assurer si on a affaire à un fibrôme, à hypertrophie de la glande palatine, à un ostéome, à un sarcome, à un kyste, à une dent incluse où à un "torus palatinus."

L'anesthésie locale est préférable pour la préparation chirurgicale de la bouche. En employant l'anesthésie locale, il n'est pas nécessaire de précipiter le travail. L'opérateur a la coopération du patient, un champ opératoire clair et net, et une gencive insensibilisée pour recevoir notre pièce de prothèse immédiate.

Les extractions des dents postérieures sont recommandées par plusieurs autorités, comme préparation préliminaire aux impressions. Si cette méthode est suivie, la préparation des alvéoles postérieures doit être faite dans la même opération où se font les extractions des dents. D'autres autorités recommandent comme préparation préliminaire d'enlever seulement les racines, les 3ièmes molaires, les dents mal placées, les dents ébranlées, brisées, infectées ou avec de l'hypercémentose. Je suis d'avis que toutes les modifications et toutes les extractions des dents doivent se faire dans la même visite. Ainsi les tissus guériront d'une manière uniforme et maintiendront une articulation balancée. C'est d'ailleurs la seule manière d'obtenir du premier coup des dentiers permanents.

Pendant que les partisans des dentiers immédiats vont leur chemin, des milliers d'autres dentistes continuent à extraire les dents et attendre que les gencives soient guéries avant de faire des pièces de prothèse.

Il résulte de ceci qu'un certain groupe de dentistes dit à leurs patients qu'ils ne devraient pas rester même une journée sans dents; un autre groupe aussi convaincu dit: "Attendez jusqu'à ce que vos gencives soient guéries." Les patients qui cherchent l'avis professionnel se trouvent devant un dilemme avec des opinions entièrement opposées.

J'ai toujours constaté que la principale objection que l'on fait contre le dentier immédiat est au dépens de l'aspect économique et qu'on ne s'attaque pas à l'aspect physiologique ou à l'aspect santé de ces pièces.

Les patients qui se font faire des dentiers espèrent bien que leurs nouvelles dents leurs donneront un service suffisamment long pour justifier le montant d'argent qu'ils auront payé pour leurs travaux. Avec le dentier immédiat ils s'exposent à une diminution rapide dans la forme des crêtes qui nécessitera la construction d'une nouvelle pièce de prothèse dans un temps très court. C'est justement à cause de cet ennui pour le dentiste et à cause de ces dépenses additionnelles pour le patient que bien des gens hésitent à opter pour ce genre de travail.

Il n'y a pas de doute cependant que les meilleurs dentiers sont ceux où les patients n'ont pas eu l'expérience et l'inconvénient de rester sans dents; où les patients n'ont pas pris de mauvaises habitudes qu'ils gardent parfois une partie de leur vie, où la figure n'a pas subi de contorsions musculaires.

Les objections que l'on fait en ce qui concerne l'aspect économique des dentiers immédiats ne sont pas valables, si ces pièces sont faites avec une technique précise et si le dentiste voit lui-même à toutes les phases du travail du laboratoire. Je dirai même que sur le coté économique comme sur tous ses autres aspects, le dentier immédiat est une économie, puisque nous pouvons obtenir un plus gros percentage de dentiers permanents du premier coup avec ce genre de travail qu'avec les anciennes méthodes de faire des dentiers.

La stabilité. Avec tous les autres facteurs égaux, plus la bouche est grande, plus les gencives sont larges et uniformes, plus elles sont favorables comme base d'un dentier. Les observations cliniques justifient ces assertions, que les dentiers immédiats aident à conserver le procès alvéolaire. Lorsque les alvéoles sont protégés contre le traumatisme et l'infection après les extractions des dents, la partie externe de l'alvéole reste intacte, aidant à supporter le caillôt et aidant également à supporter une crête alvéolaire plus large et plus uniforme.

Le placement des dents, plus que l'occlusion, sert à diminuer le choc, que reçoit la base du dentier. C'est pourquoi il

faut placer les dents de manière à ce que la pression de la mastication soit transmise vers la partie dure des gencives. Avec le dentier immédiat, les gencives sont conservées très larges, les dents sont facilement placées sur la partie dure des gencives et elles résistent ainsi facilement à la force verticale de la mastication.

Lorsque l'on observe avec un oeil de prothésiste, et qu'on se rend compte des difficultés que les gens ont avec leurs dentiers, spécialement avec leur dentier du bas, et qu'on constate la ruine de centaines de bouches de personnes édentées, on est saisit par l'importance qu'il y a d'utiliser tous les moyens à notre disposition pour prévenir l'effondrement de la structure osseuse des mâchoires. Cet unique moyen de prévenir cet effondrement de la structure osseuse des mâchoires nous l'avons à notre disposition et c'est avec le dentier immédiat que nous pouvons l'obtenir.

La mastication. Tout facteur qui aide à stabiliser le dentier augmente naturellement l'efficacité de la mastication. Le rôle du dentier immédiat est de faire fonctionner les muscles de la mastication comme à l'ordinaire, après que les dents naturelles ont été extraites. La même distance intermaxillaire et la même insertion sont maintenues, alors la même fonction habituelle est maintenue intacte. Il ressort de ceci que ce ne sont pas les dents mais plutôt la fonction des muscles, qui est responsable du procés alvéolaire.

Le procès alvéolaire doit sa fonction aux muscles de la mastication, exerçant une pression sur les alvéoles sous l'influence des dents. On doit déduire de ceci que pour maintenir la structure du procés alvéolaire, on doit maintenir les fonctions des muscles avoisinants. Il ne semblerait pas logique alors de soutenir que le procès alvéolaire doit disparaître maintenant que les dents sont disparues. Lorsque la fonction des muscles est maintenue au moyen d'un dentier immédiat, une sorte de tissu osseux secondaire se forme dans les alvéoles qui durcit ces alvéoles et les rendent capables de résister à la pression de la mastication.

Il est bon de diminuer la force musculaire des mâchoires chez les personnes qui portent des dents artificielles, ce qui peut être obtenu en adoucissant les contacts d'occlusion et en diminuant la quantité d'aliments à être mis à la fois entre les mâchoires. Ces aliments seront alors mieux imprégnés de salivation. Avec les hydrates de carbone, la mastication sera retardée et la ptyaline aura le temps de s'incorporer aux aliments.

L'esthétique. Si on veut éviter l'expression de fausses dents, on doit reproduire aussi fidèlement que possible la largeur, la forme, la couleur, la location et les autres détails qu'avaient les dents naturelles, qui sont faciles à reproduire puisque nous avons tous ces détails sur le modèle. Avec l'ancienne méthode de faire de la prothèse, on commence par détruire tous les détails essentiels à l'esthétique et nous faisons ensuite un travail qui est exposé à dévier du naturel.

La phonétique. Le discours, le discours bien articulé, l'énonciation des mots font parties des principales fonctions des dents.

Salter dit: "Les dents constituent un élément essentiel dans l'organe de la parole. Sans elles, la prononciation claire et précise d'un grand nombre de lettres, particulièrement les consonnes, serait impossible, et les ressources de la cavité buccale comme organe de discours, seraient fort compromises; nous venons à l'évidence que lorsque les dents sont enlevées le parler est changé."

La principale manière par laquelle les dents aident à la production des sons articulés, est en agissant comme une arche ou comme les côtés d'un fer à cheval, en dedans desquels et contre lesquels la langue peut agir comme une valve et par sa pression sur les parois, elle peut produire des effets différents.

Je viens d'exposer le paragraphe précédent pour renforcir mon argument que les dents artificielles, doivent être placées dans la même position crânienne qu'occupaient les dents naturelles. L'action de la langue joue un rôle important dans la location des dents antérieures. Si la langue est gênée dans ses mouvements, distalement ou lingualement, elle provoque non seulement l'instabilité de la pièce artificielle, mais elle provoque un changement dans le parler ou la prononciation des mots.

En plaçant les dents artificielles à la même place qu'occupaient les dents naturelles et en ayant soin de faire une voûte palatine mince, non seulement l'expression naturelle de la figure sera maintenue, mais l'expression vocale sera aussi maintenue dans toute sa valeur.

La réaction mentale. Malgré notre expérience dans notre profession, il ne faut pas oublier que beaucoup de patients ont des idées fixes et conçues et que nous devons agir en conséquence. Le patient, qui persiste dans une opinion différente de la nôtre, a souvent une intuition qui justifie son assertion et qu'il s'adaptera plus facilement au travail qu'il réclame, qu'au travail que nous lui suggérons. Bien que les dentiers immédiats rendent supportable la transition entre les mauvaises dents et les dents artificielles, on ne doit pas être poussés à faire des extractions à l'aveuglette. Il faut être assez humain et assez professionnel pour se tenir en garde contre un tel abus. En supposant qu'un dentier immédiat soit complété et que le patient change d'idée entre la prise de l'impression et la livraison du dentier, il est préférable de garder ce dentier en souvenir plutôt que de forcer le patient à faire enlever ses dents malgré lui.

Le confort. Le dentier immédiat, lorsqu'il est accompagné d'extractions faites soigneusement, sans traumatisme, sans alvéolectomie est pratiquement sans douleur. La sensation d'analgésie que le patient ressent après la mise du dentier en place peut être expliquée par la pression intermittente que les tissus reçoivent, favorisant la circulation et inaugurant une guérison sans inflammation. Les patients sont prévenus de ne pas enlever leurs dents pour les premières 24 heures, après quoi une bonne partie de la guérison se sera déjà produite. Autre raison additionnelle de confort, c'est la continuité de la température du corps dans le voisinage des tissus lacérés.

La suture n'est pas nécessaire lorsque nous posons des dentiers immédiats. Le dentier sert de ligament, tenant ensemble les tissus lacérés jusqu'au temps où la guérison les aura définitivement unis.

Les tissus mous autour des dents ne doivent pas être enlevés, car ils agissent comme un coussin flexible rendant la pièce plus confortable. Durant le temps de la guérison, une partie de ce tissu mou disparaîtra, laissant l'épaisseur désirée de muqueuse.

Au point de vue de la santé, voici ce qu'en disait le Dr. William Brady, médecin, dans un article qu'il écrivait dans un journal de Montréal: *"Les bons effets du dentier immédiat sur l'apparence du patient, qui sont incontestables, sont cependant, insignifiants si on les compare avec les heureux effets qu'ils produisent sur la digestion, la nutrition, la vie, la santé et le moral. Avec l'ancienne méthode de faire des dentiers, ce ne sont pas seulement les gencives qui se contractent, qui s'atrophient et deviennent faibles et plus susceptibles aux maladies, mais en plus toutes les membranes muqueuses, les glandes, les muscles et la structure osseuse de la bouche, de la mâchoire et de la figure sont également atteints. C'est pourquoi les dentiers immédiats ont tellement plus de valeur que la vieille méthode de faire des dentiers. Ils gardent toute la structure en fonction et en santé et par surcroît ils gardent la digestion, la nutrition et la vie au niveau nécessaire pour avoir une bonne santé et de l'efficacité.*

En conclusion la stabilité, la mastication, l'esthétique, la phonétique, la réaction mentale, le confort, le point de vue santé et le point de vue économique se groupent ensemble pour faire de ce dentier immédiat un travail précieux, qui solutionne le cas de ceux qui ne veulent pas être vus sans dents, qui ne veulent pas perdre beaucoup de leur temps de travail et qui veulent avoir des pièces de prothèses solides et qui veulent conserver une bonne santé.

400 est, rue Sherbrooke

BIBLIOGRAHIE

1. Dittmer C. K.—"Surgical Preparation of the Mouth for Immediate Denture." J.A.D.A. 30. 1734. 1943.

2. De Van M. M.—"Full Denture Problems and how Immediate Replacement Help to Solve them." Dental Cosmos. 73. 569. 1931.

PAGES EDITORIALES

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La carie dentaire est mâtée?

Dans la livraison de septembre du New York Journal of Dentistry, le docteur John O. McCall commente, dans un Editorial, les avancés des manufacturiers de médicaments destinés à bannir à jamais la carie dentaire, comme maladie la plus répandue du genre humain.

Les publications dentaires, depuis quelque temps, sont remplies d'articles et de rapports, traitant de produits et de techniques propres à prévenir la carie. Les mérites respectifs de l'application du fluor, de l'eau traitée au fluor, de l'imprégnation des dents par le chlorure de zinc et le ferrocyanure de potasse et l'emploi des dentifrices à base d'ammonium sont comparés par les auteurs.

Tous les dentistes sont intéressés au plus haut point par ces travaux de recherches et quelques-uns se demandent ce qu'il adviendra de leur clientèle, si et quand la prévention de la carie sera un fait accompli.

D'abord, il faut dire que la prévention intégrale et complète de la carie n'est pas encore réalisée et n'est pas près de l'être. Cependant, les réalisations des chercheurs, à date, nous laissent entrevoir une diminution certaine de la carie, disons dans une dizaine d'années. Il faut s'attendre à une réduction, variant de 40 à 50 pour cent, dans la fréquence de la carie dentaire, d'ici quelque temps.

Cette nouvelle situation produira des changements incontestables dans le domaine des activités des dentistes. D'après le docteur Bunting, doyen de la Faculté Dentaire de l'Université du Michigan, la carie dentaire, qui affecte 95% de la population américaine, est le plus grand facteur individuel de la pratique dentaire et des services dentaires de santé. Selon lui, 75% du travail du dentiste est consacré, directement et indirectement, à

la lutte contre la carie. Jusqu'à aujourd'hui, cette besogne, à laquelle contribuent 70,000 dentistes, a consisté dans la réparation des lésions dentaires, pour une minorité de la population.

Si ces chiffres sont vrais—et ils le sont probablement—une diminution de 50% dans la fréquence des caries signifierait une réduction de 38% dans le travail du dentiste, laissant une marge correspondante pour un plus grand nombre de patients ou pour d'autres genres de traitements.

La profession dentaire doit donc se préparer, dès maintenant, à des changements, qui se produiront dans l'exercice de son art. Les programmes d'éducation dentaire, dans les Universités, devraient être établis en fonction de ces modifications, qui affecteront la routine journalière du dentiste de demain.

Un domaine, qui a été négligé par la plupart des dentistes et qui est responsable de la perte des dents préservées de carie, est la paradentose. Le problème de la carie étant quasi-règlé, la profession dentaire devra se tourner vers ces maladies de gencives, qui insidieusement font, elles aussi, leur oeuvre de destruction. Les dentistes pourront occuper leur temps libre par le traitement des périodontoclasies, quelque peu négligées jusqu'à aujourd'hui et les programmes d'éducation dentaire devront laisser une place bien large à l'étude de ce service.

Si les dents sont conservées d'avantage, les occlusions traumatiques et tous les facteurs favorisant les affections gingivales seront plus nombreux et—en conséquence—les troubles gingivaux seront plus fréquents.

Il y a plusieurs autres services dentaires possibles, qui s'amplifieront et prendront plus d'importance, quand le dentiste ne sera pas confiné à la réparation des dégats de la carie. L'éducation d'hygiène dentaire, l'orthodontie, la réhabilitation buccale, etc, sont des "occupations" susceptibles d'améliorer le rendement de la profession dentaire.

Nous demeurons optimistes pour la dentisterie de l'avenir et le dentiste continuera de jouer son rôle—peut-être un peu différent—dans le maintien de la santé du public.

GERARD DE MONTIGNY.

COURS D'ORTHODONTIE

Université de Montréal — du 16 au 26 novembre

Cours d'orthodontie s'adressant aux dentistes de pratique générale et traitant des soins simples à donner aux cas ordinaires.

Pour l'inscription, s'adresser au Dr Paul Geoffrion, Université de Montréal, 2900 *Boul. Mont-Royal, Montréal. Frais d'inscription*: $60.00.

Dans le Monde Dentaire

Nouveau représentant de la Nouvelle-Ecosse au Bureau des Gouverneurs de l'A.D.C.

A la suite de la mort du docteur V. D. Crowe, le docteur G. M. Dewis a été nommé, pour lui succéder, comme délégué de la Nouvelle-Ecosse, au Bureau des Gouverneurs de l'Association Dentaire Canadienne.

•

Augmentation d'octroi à l'A.D.C.

A la réunion annuelle de l'Association Dentaire de la Nouvelle-Ecosse, la résolution suivante a été approuvée à l'unanimité: "Que la cotisation annuelle soit montée de $15.00 à $30.00, et que, sur ce montant, la somme de $20.00 soit remise à l'Association Dentaire Canadienne." Ce règlement prend effet en 1950.

•

Programme de formation pour les hygiénistes dentaires.

Le 2 juillet 1949, à Chicago, le Conseil d'Education Dentaire de l'Association Dentaire Américaine a formulé une politique de la fonction du programme d'éducation dentaire pour les hygiénistes à savoir:

Le rôle premier de l'hygiéniste dentaire est d'aider les membres de la profession dentaire à donner aux populations la santé de la bouche. Elle peut appliquer son savoir et son entraînement dans le cabinet d'un praticien ou dans des organisations éducationnelles de santé, dans les écoles ou autrement. Dans tous les cas, elle est en mesure de remplir une fonction importante dans l'éducation de la santé.

Les interventions entreprises dans la bouche par les hygiénistes devraient être circonscrites aux surfaces naturelles ou reconstituées des couronnes des dents, avec comme point de limite l'attachement épithélial; en aucune circonstance, devraient-elles tenter de traiter les régions pathologiques des couronnes des dents ou des tissus adjacents.

Le dentiste peut, à sa discrétion, demander à son hygiéniste d'accomplir d'autres besognes importantes, dans le cabinet, travail, que sa formation à l'Université, l'a rendue apte à faire.

Le cours actuel de deux ans paraît adéquat à préparer l'hygiéniste à des tâches, qui lui sont assignées dans un bureau privé. Cependant, quand elle est embauchée par une école ou un organisme d'éducation officielle, on devrait exiger qu'elle parfasse sa formation pour se qualifier d'avantage pour ces responsabilités."

•

Définition de la dentisterie.

"A la trente-septième assemblée annuelle de la Fédération Dentaire Internationale, tenue à Milan, du 30 mai au 4 juin dernier, la Commission d'Hygiène a adopté une définition de ce qui est généralement appelé "dentisterie."

La dentisterie est ce service de santé, qui s'occupe spécifiquement de l'établissement, du maintien, de la restauration et de l'amélioration de la santé, de la fonction et de l'esthétique de la cavité buccale et de ses parties adjacentes, dans leurs rapports avec l'individu pris en entier.

Cette définition comprend la découverte des manifestations buccales des maladies organiques, la prévention et le traitement des maladies buccales, des blessures, des malformations et des déficiences; la réparation des dents détruites par des accidents ou par la maladie et leur remplacement, quand elles sont disparues.

Le domaine de la dentisterie est ainsi comparable à celui de l'ophthalmologie, la laryngologie, l'otologie et la dermatologie; et son importance sociale et professionnelle est pour le moins aussi grande.

Il est donc raisonable de définir la dentisterie comme "l'odonto-stomatologie, branche de la médecine."

•

Recherches à New York.

Le docteur Roland Gendron, diplômé de l'Université de Montréal, vient de finir une année d'études post-scolaires en Périodontie, à l'Université de New York, sous la direction du docteur Samuel Miller. Le docteur Gendron a poursuivi des travaux de recherche sur l'occlusion traumatique de même que sur les effets des radiations atomiques sur les tissus de la face et de la bouche.

Changements dans le système de santé nationale anglais.

Le Ministre de la Santé, M. Bevan, vient d'annoncer à la Chambre des Communes, le 19 juin, que les honoraires payés jusqu'ici aux dentistes d'Angleterre, d'après le plan d'assurance-santé en vigueur depuis un an, doivent être réduits comme mesure d'urgence. Les raisons, qui l'ont amené à cette décision, sont commentées dans un mémoire remis aux Comités Exécutifs de cet organisme gouvernemental.

Ce mémoire renferme une études des revenus de 5,078 dentistes, d'octobre 1948 à mars 1949. Ces chiffres montrent que 1,066 dentistes gagnèrent une revenu annuel brut de £6,000 et que 333 de ceux-ci recevaient des honoraires excédant £8,400. (une £ représente environ $4.00 en argent canadien.) Ces chiffres ne tenaient pas compte de la coupure de 50 pour cent imposée sur les honoraires dentaires, quand ils dépassaient £400, par mois, en vigueur depuis février.

Les points importants des propositions ministérielles sont les suivants:

> Réduction d'à peu près 20% sur les revenus bruts des dentistes.
>
> La nouvelle échelle d'honoraires a pris effet le 1er juin.

Le mémoire explique que l'échelle initiale des honoraires devait donner au dentiste, travaillant à plein temps, seul, et d'expérience moyenne, un revenu net annuel de £1,778. Le nombre d'heures dépensées au fauteuil, d'après le Comité Spens, devait être 33. Les dépenses du cabinet devaient représenter en moyenne un peu plus que la moitié des revenus bruts, de sorte que le revenu net prévu de £1,778 correspondait à un revenu brut d'à peu près deux fois cette somme.

Quelques mois plus tard, après la mise en exercice du plan, il devint apparent que quelques dentistes gagnaient plus qu'il avait été prévu. Il fut décidé que, bien que certains revenus excessifs justifiaient une enquête dans certains cas, il n'y avait pas assez d'évidence pour déclancher une baisse générale dans l'échelle des honoraires. En conséquence, les revenus furent limités à £4,800 (somme brute) par année et cette mesure fut annoncée le 9 décembre 1948 et prit effet le 1er février 1949. Cette limite permettait une rémunération aux mêmes honoraires jusqu'à un total, qui était environ 25 pour cent de celui recommandé par le Comité Spens, en considération des longues heures de travail dépensées par les dentistes pour ce qu'on croyait être une bourrée temporaire.

Les organisations dentaires furent invitées, le 21 janvier, à nommer des représentants pour former un comité, qui étudierait la moyenne du le temps passé au fauteuil par les dentistes en Angleterre, dans les Galles et en Ecosse, dans le Service National de Santé et en clientèle privée, pour donner tous les genres de traitements énumérés dans l'échelle des honoraires.

La correspondance échangée entre le Ministère et l'Association Dentaire Britannique dans la formation de ce comité est reproduite dans un appendice au mémoire.

La lettre du Ministre, le 28 janvier, suggère la possibilité de consulter les organisations dentaires dans le but de reviser temporairement l'échelle des honoraires, en attendant le rapport du comité. Le Ministre ne put accéder à la demande des organisations d'attendre le rapport du comité, avant de modifier le taux des honoraires.

Le mémoire révèle, en outre, que des renseignements supplémentaires sur les revenus sont mis à la disposition de ceux, qui veulent les consulter.

Le tableau reproduit plus bas établit le revenu annuel autorisé par le Bureau des Estimations Dentaires pour les 5,078 dentistes faisant partie du plan du gouvernement, dont les revenus pour une période de six mois, d'octobre 1948 à mars 1949, laissent entrevoir clairement le total annuel:

Nombre de dentistes	Total des revenus bruts	Total des revenus nets (tenant compte des 52% de dépenses de cabinet)
	£	£
209	0—1,200	0— 576
712	1,201—2,400	577—1,152
1128	2,401—3,600	1,153—1,728
1122	3,601—4,800	1,729—2,304
841	4,801—6,000	2,305—2,880
479	6,001—7,200	2,881—3,456
254	7,201—8,400	3,457—4,032
333	Plus de 8,400	4,033 et plus

Ce tableau ne tient pas compte des limitations de revenus au-dessus de £4,800 (brut), par année, établis en rapport des paiements faits le ou après le 1er février et n'alloue rien pour les excédents annuels.

Le mémoire fait remarquer que à peu près

59% des 5,078 dentistes faisant partie du plan national gagnaient plus que les recommendations du Comité Spens et que 41% recevaient moins. Il semble raisonnable de croire que des additions aux sommes indiquées peuvent être faites, en tenant compte des revenus provenant de la pratique privée.

La préparation du rapport du comité et l'élaboration d'une nouvelle échelle d'honoraires devraient prendre assez de temps. En conséquence, le Ministre a invité les organisations dentaires à se joindre à lui pour discuter la question de la diminution "par interim" des honoraires. Les organisations n'acceptèrent pas cette invitation et le Ministre se dit justifié de ne plus tolérer un "drainage injustifiable des fonds du trésor."

Il a donc décidé d'amender les règlements, qui ont trait aux honoraires payés par le gouvernements aux dentistes, après le 31 mai. Celle nouvelle échelle abolit la limitation des revenus imposée au mois de février, qui cessera le 31 juillet.

Le tableau plus bas donne la liste des honoraires proposés et présents:

	Présents £ s. d.	Proposés £ s. d.
Examen et rapport	0 10 0	0 5 0
Détartrage	0 16 6	0 12 6
Obturations		
Minimum	1 0 0	0 15 0
Maximum	1 17 6	1 7 6
Traitement de canaux		
Minimum	2 0 0	1 10 0
Maximum	3 0 0	2 5 0
Extraction		
Une ou deux dents	0 10 0	0 7 6
3, 4 ou 5 dents	0 15 0	0 11 6
6, 7 ou 8 dents	1 0 0	1 15 6
9, 10 ou 11 dents	1 5 0	0 19 6
12, 13 ou 14 dents	1 10 0	1 3 6
15, 16 ou 17 dents	1 15 0	1 7 6
18, 19 ou 20 dents	2 0 0	1 11 6
Plus de 20 dents	2 7 6	1 17 6
Anesthésie générale		
1 à 3 dents	0 10 0	0 10 0
4 à 11 dents	1 0 0	1 0 0
12 à 19 dents	1 10 0	1 10 0
20 dents et plus	2 0 0	2 0 0
Prothèse		
Haut et Bas Complets	10 10 0	9 9 0
1, 2 ou 3 dents	4 17 6	4 5 0
4 à 8 dents	5 15 0	5 0 0
9 à 14 dents	6 1 6	5 7 6
Réparations		
Minimum	0 18 0	0 15 6
Maximum	9 7 6	1 15 0
Couronnes		
Minimum	4 7 6	3 17 6
Maximum	9 7 6	8 5 0

OBSERVATIONS

1. Maintenant que plus de 90% des dentistes anglais ont signé et font partie du Plan de Santé Nationale, le gouvernement entreprend de diminuer les honoraires de deux façons:

a) *En février, les revenus ne peuvent dépasser tel chiffre*;

b) *Plus tard, comme on le voit plus haut, la liste des honoraires est sensiblement diminuée.*

2. C'est toujours la même histoire, qui se répète, comme dans d'autres pays: d'abord, des offres alléchantes et ensuite les hauts cris pour dire que les professions exploitent le public. La leçon à tirer de tout cela est que le dentiste, qui entre dans un organisme gouvernemental du genre, perd le contrôle de ses propres affaires et devient l'objet de gens, qui ne connaissent rien à l'exercice de la profession dentaire.

25ème ANNIVERSAIRE

de la

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Journée d'études — Coquetel — Dîner de Gala — Danse

Pour renseignements: **Dr VIGER PLAMONDON**
7, ave des Erables.—Québec.

CONGRES DE LA SOCIETE DENTAIRE DE MONTREAL

Hôtel Windsor, Montréal, 2-3-4 *juin* 1949

Photographie prise au cours d'un dîner du Congrès de la Société Dentaire de Montréal, tenu à Montréal, les 2, 3 *et* 4 *juin* 1949, *à l'occasion du vingt-cinquième anniversaire de la fondation de cette Société.*

Courtesy Manitoba Bureau of Travel and Publicity

ONE OF THE TWIN FALLS ON THE CHURCHILL RIVER

Lovely to look at and a potential source of hydro-electric power

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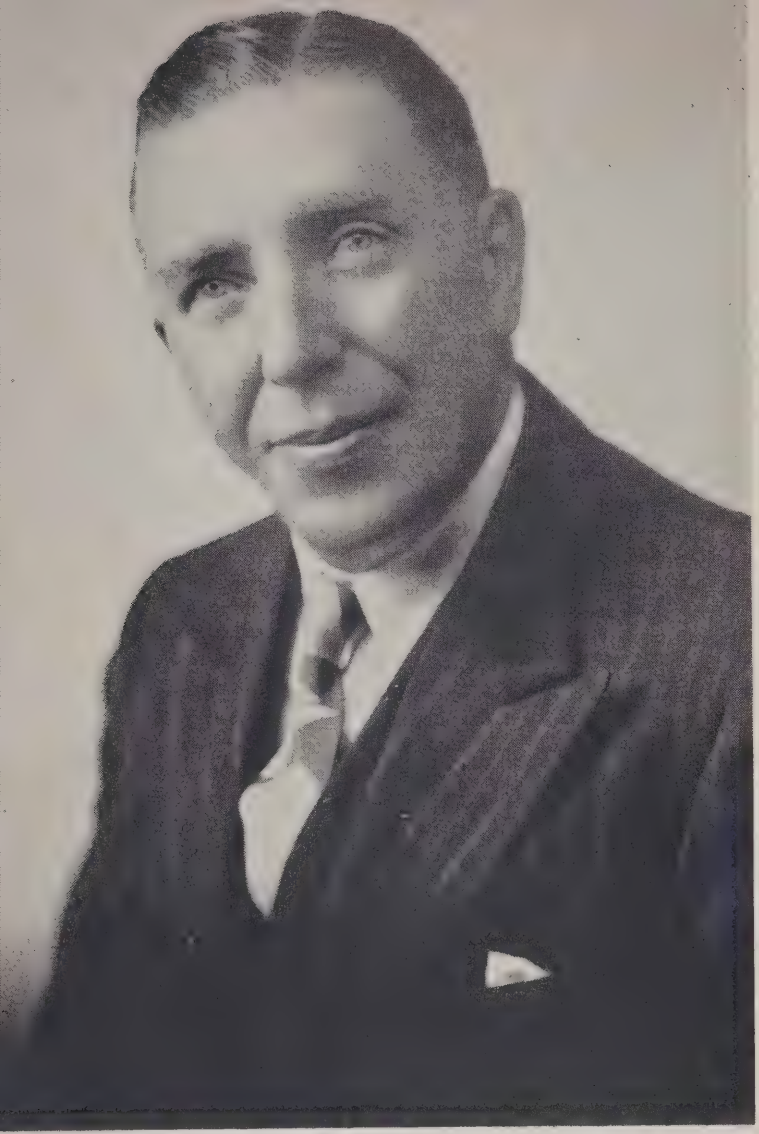
All works of taste must bear a price in proportion to the skill, taste, time, expense and risk attending their invention and manufacture.

Those things called dear are, when justly estimated, the cheapest: they are attended with much less profit to the Artist than those which everybody calls cheap.

Beautiful forms and compositions are not made by chance, nor can they ever, in any material, be made at small expense.

A composition for cheapness and not excellence of workmanship is the most frequent and certain cause of the rapid decay and entire destruction of arts and manufacturers.
—Josiah Wedgwood.



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Past President, Manitoba Dental Association.
Past President, Western Manitoba Dental Society.

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PREVENTIVE DENTISTRY–A CHALLENGE*

by JAMES M. MATHER, M. D., D. P. H. Medical Officer of Health & Director, Halton County Health Unit, Milton, Ontario.

ALL of us engaged in public health tend to get discouraged at times. We seem to do the same old thing over and over again making no apparent progress. However, if we sit back and think about it we realize that, even in our lifetime, amazing advances have been made. We recognize that we actually have done some good, not to the point of complacency and being able to say our job is done but, rather, the advances already made encourage us to go on and tackle even more difficult problems that still face us.

Consider for a moment the advances that have been made in communicable disease control. When my mother trained as a nurse at the beginning of this century, whole hospital wards were kept for the reception of typhoid fever cases; now, a case of typhoid is almost headline news. In 1885 in Toronto the death rate from this disease was 52 per 100,000; in 1945 it was zero. Diphtheria is another example. Less than 30 years ago this disease was a dreaded scourge. Since the introduction of diphtheria toxoid there has been a 90 per cent reduction in cases and the disease is no longer a menace. Pasteurization of milk has practically wiped out tuberculosis of bovine origin and undulant fever in Ontario.

Other advances in public health, though not as spectacular, are just as important. There is a steady decrease in maternal and infant mortality. Proper industrial hygiene has made our factories better and safer places in which to work. Good environmental sanitation has made our living much more pleasant and considerably longer.

These advances in public health are rightly regarded with pride but they do not allow us to coast along now, rather, they serve to remind us that much remains to be done.

One of the most significant trends in recent years is the ever-increasing realization by many groups and by many individuals that public health is a matter for all of us, not just for a few specially trained individuals. It might be well to attempt to define the term "Public Health". The best and most concise definition is that provided by Sir Wilson Jameson. He defines it as "the health of the public". This, on first consideration, might even seem facetious, but the exact opposite is the case. Anything that affects the health of our people is public health. Public health practice is an ever-changing picture. Originally, it was concerned only with sanitation and communicable disease control. Read the early books of the Old Testament and you will realize the antiquity of public health. It was the Venetians in 1348 who instituted quarantine as a means of communicable disease control. However, in comparatively recent years it has been realized that the control of com-

*An address delivered before the dental public health council of Ontario during the Ontario Dental Association Convention in Toronto, May, 1949.

municable disease and proper environmental sanitation are not enough to ensure the health, happiness, and well-being of our people. This newer concept of public health is well put by Dr. C. E. A. Winslow in the American Journal of Public Health,[1] who defines public health as: "The science and art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in the principle of personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual a standard of living adequate for the maintenance of health; organizing these benefits in such a fashion as to enable every citizen to realize his birthright of health and longevity."

In my own personal experience I have seen the awakening consciousness of a great variety of groups and individuals to their public health responsibilities. These events have given me great encouragement since it is obvious that these groups and individuals now realize that public health is a community responsibility and that the official health agency is merely the coordinating body. About a year ago I was asked to speak at the opening of a new wing of the Ontario Veterinary College at Guelph. I discussed the role of the veterinarian in a rural health program. I am on the faculty of that school and, by 1951, the students will have a total of 150 hours of public health teaching in their curriculum. The part of the veterinarian in food control is vital and it is apparent that the responsibility is being shouldered. Some months ago I attended a meeting of the Academy of Medicine in this city. This was a joint meeting of dentists and paediatricians. I don't suggest that the two groups altogether agreed but the important point is that they have now reached the stage where they realize that the only practical solution to their mutual problems is to sit down together and thrash them out. And now, here I am, a physician, invited to address a meeting of dentists. All of these events are perhaps not world shaking in their import but they do suggest a happy trend.

One of the dentists in my county recently told me he couldn't understand why I, a physician, should be so interested in dentistry. The answer to that I think is two-fold. As Medical Officer of Health and Director of a Health Unit any thing that affects the health of my people is of interest to me. Thus, my interest is not confined solely to the work of the physician and nurse but also to the dentist, to the veterinarian, to the food producer, processor, and the distributor, to the school authorities, to the builder, and to a host of others who, directly or indirectly, are concerned with the health of the public. On the other hand, I am at the present time perhaps spending more time with the dental group than with some of the others. There are several reasons for this. I believe the need for better dental public health is greater, the profession is becoming aware of this need, and the public is ready for the needed advances.

What right do I have to appeal to a group of dentists for cooperation and help in meeting and solving what I consider to be a major public health problem? Is there any problem in dental public health today? My first mass exposure to this problem was in 1940 when I was an R.C.A.F. recruiting officer. As you will remember, at the beginning of the war we were pretty choosy about our recruits and rejected many applicants because of physical defects. What was the major cause for rejection? Dental defects far outstripped other causes. We were able to be particular when our manpower reserve was large but later, when our reserves became depleted, we could not let dental defects be a

bar to enlistment. Rather, we took in recruits on whom major dental repairs had to be done before they were fit for duty. Any of you who were dental officers will, I think, agree with me that the state of dental health in recruits was nothing short of ghastly. Yet, this was the cream of our youth; this was in Canada, one of the most enlightened and prosperous countries in the world where dental care has been available for generations. I had the opportunity to see the state of the dental health of many of our Allies. All were in much the same condition as our own men. I remember one large group of R.A.F. men where complete dentures were quite common in men in their late 'teens and early twenties.

After the war I became an Assistant Medical Officer of Health in a County Health Unit in one of the most prosperous counties of southern Ontario. I spent much of my time in the examination of children in both rural and urban schools. I don't think I need to tell you what we found to be the most common defect; obviously it was dental. It is interesting to note that we didn't even notify the parent of decay in the deciduous teeth; we knew quite well it was useless, because nothing would be done. This county was well served by dentists in all the towns.

In September 1947, I came to Halton County. For several years before I came the local school boards in the rural areas of the county, in cooperation with the local dentists, had been paying for the dental care of school children. This work was done in the dentist's office and not in clinics. The school boards paid for extractions and fillings but not for orthodontia, etc. The dental health of school children in this county showed definite improvement over my previous experience. We did not hesitate to notify a parent of deciduous decay since the financial obstacle to care had been removed. I cannot quote statistics, but I have a distinct impression that mouths were healthier where this free treatment was available. But it has not completely solved our problem. The general attitude is still to wait until something dramatic like an aching tooth, an abscess, or a huge cavity develops before dental attention is sought. The preventive aspect of dentistry had not been stressed. Rarely had a child seen a dentist before he entered school. There was no appreciation of the importance of the deciduous teeth in the normal, final architecture of the mouth. Nor did the problem end with the child or the parent. There were dentists who would not, or could not, do children's work. They were much more interested in the extraction of teeth, the manufacture of dentures, or the filling of cavities. However, insofar as my own county is concerned, I am not discouraged. There are several factors in operation which will, I think, eventually meet with and overcome this situation. We have a group of dentists who are good citizens, who are interested not only in making a living, but also in the welfare of their community. We have school authorities who are keen to do everything in their power to promote the welfare of their children. Already, two area school boards have assumed the cost of dental care for the pre-school child from the age of three onward. Last but not least, we have people who are receptive and who are willing to do everything in their power to help their children.

Let's face the facts squarely. We have had dental care available in this province for many years. In spite of that care being available, I think you will agree with me that there is an ever-mounting backlog of dental ill health. Why have we failed? What can we do about it? You may think it presumptuous of me to make such statements to members of a sister profession. You may even consider it is none of my business. But that is the crux of the whole matter, it is my business, and the real concern of all others who are interested in the welfare of our people. I consider dental

ill health to be one of our major public health problems and I maintain there is much that we can and should do about it.

Negative Approach

With minor exceptions, until very recent years, our approach to this great problem has been completely negative. The major role of the dentist has been to repair rather than to anticipate and prevent dental damage. For generations, the dentist has gone through the same routine of filling cavities, extracting teeth when they were beyond repair, and making dentures when he could not longer patch up the patient's own teeth. All of this has led us exactly nowhere. It has made the dentist an expert technician but has done nothing to solve one of mankind's great problems.

Before we all give up in despair and say there is no solution, let me hasten to proclaim that I think we can do much to remedy this situation. Perhaps we will not solve all our dental problems in this generation but, at least, we may be able to give leadership so that those who come after us will benefit.

The Solution

In my opinion, our task is to get the child to the dentist as early as possible in his life and to keep him under continuous dental care. All other problems are subsidiary and related. This, then, is the theme for all my remarks.

In a recent issue of the American Journal of Paediatrics there was a statement by Dr. Virgil Loeb[2] which I thought was significant. This was in the form of a letter to the editor who had asked Dr. Loeb to comment on the topical application of sodium fluoride. In part, Dr. Loeb says: "As you know, a great deal of scientific research has been undertaken on the cause of dental caries, and, while much has been learned, investigators are still not in agreement. Undoubtedly there are both local and systemic factors which may be responsible, either singly or in conjunction with one another. Though the aetiology is still undetermined, several methods to control and reduce dental caries have been suggested." That, I think, sums up the problem of caries very neatly. I do not propose to become involved in any debate about the relative importance of the acidophilus count, the role of the fermentable carbohydrates, the value of sodium fluoride, the new protective toothpastes, or even, the importance of thumbsucking. I feel it is much more important to discuss how we can get the young child under early and continuous dental care.

Education

The most important factor in our approach will be education. In most of our large cities, educational authorities have maintained treatment centres for school children for many years. In my own county free treatment is available. But this does not solve the problem since people still wait for treatment until the disease is well established. We must concentrate on instilling in our people the preventive approach to the problem. Who are the individuals who can do this? There is only one group, dentists trained in public health. These men, as part of the local official health agency can do more than any other group.

We will probably all agree that the public health trained dentist is an essential and that the public requires adequate education in the need for preventive dentistry. However, I suggest that there is also a need for the education of the practising dentist. This is being taken care of for the undergraduate by the establishment and elaboration of public health teaching in the dental schools and in the postgraduate field by the diploma course for those who wish to make a career in this specialty. However, there is still a necessity for teaching of the man already in practice. I suggest that this Association has a responsibility in that regard.

One could elaborate on the approach to this problem on a national or provincial scale. However, I think it

would be best for me to attempt to outline what I propose to do in my own county. I do not suggest that I have all the answers, rather, I will tell you what I think should be done, if I am wrong I would welcome suggestions and criticism. We must all keep an open mind on this subject, if we are honest with ourselves we will admit we do not as yet know all the answers.

I have stated that I think the approach is primarily educational and that a program based on treatment only is fore-doomed to failure. To some degree, the converse is also true. Unless treatment facilities are available, no amount of education will accompliish our purpose of getting the child under early continuous dental care. There may even have to be an element of bribery at first until the public is fully sold on the dividends paid by this preventive care. Let me cite just two examples. In the city of Toronto, one of the earliest great centres to have widespread immunization against diphtheria, the response was poor until the Department of Health provided free toxoid clinics. When these clinics were set up the response was overwhelming. Now, 20 years later, no mother would allow her child to risk diphtheria even if she had to pay a good deal for the inoculations. By a continuous program of education the public has been made aware of the need. When I was with the W. K. Kellogg Foundation before the war, we paid for all the dental care for school children regardless of their means. Later, this subsidized treatment program was withdrawn but the care has continued because by good teaching the parents now realize the need and the benefits. Please do not misunderstand me, I am not advocating clinics but rather some form of assistance for preventive dentistry in the family dentist's office.

Education must be a continuous effort. We can all remember elaborate dental surveys for which there was no follow-up. I know of one where the findings had been completely lost when we attempted to locate them three years later. I suggest that dental surveys are a waste of time, money, and effort unless there is adequate and continuous follow-up.

Some one person must be responsible for the promotion, coordination, and implementing of our efforts. At the local level, as in a County Health Unit, this calls for an addition to the staff of the official health agency. The local health department is the logical body to promote this work. It has access to the age group where the care is needed, it has no axe to grind since its members are not in competition with the practising professional men, its members are trained in the principles of public health education, it maintains close relations not only with the school boards, but also with the practising dentist. However, neither the nurse nor the medical officer have the background to do proper dental public health education. Admittedly, in the past, we have done a great deal but we do not feel that our efforts were as effective as we might have wished. Similarly, school teachers have done their best but their best is not good enough. In our county, local dentists have made dental surveys of the schools but these surveys, of necessity, have been cursory and spasmodic since these men are all extremely busy in their own practices. Therefore, we propose adding to our staff a full-time public health trained dentist.

What will his duties be? All his efforts will be directed to one ultimate end: to get the child under continuous dental care as early as possible. To accomplish this he will have to educate the children and their parents, the school authorities, and the dental profession itself. He will have to sell the advantages of preventive dentistry. It is a huge task but I think the proper man with the proper training can ultimately do it. I am convinced that if he is able to do it, our children of today will be dentally healthy adults tomorrow.

Conditions in Halton County

In my county there are 57 rural and 9 urban elementary schools with a total of 5,000 pupils. There are five secondary schools with an enrolment of about 1,000. As a first step I propose that each of these children will have a complete dental examination each year. You might suggest we would be better to start with the pre-school group. However, the school population is the most easily reached and from them we can advance our program into the pre-school group. Many of our rural schools have only one room. To do a satisfactory examination the dentist will require a mobile examining room. For that purpose we will provide a dental coach. His examination in a school will be prefaced by a talk to the students to explain the reasons for the examination, the need for proper dental care, and the fundamentals of good dental health. His examination will be primarily a teaching experience for the child. I think we can do no better than to use the charts and forms devised by Dr. Honey and his group in the Canadian Red Cross Society. Each child will be given a report of his findings to take home. Where reparative work is needed, no problem will arise in those areas where the school boards assume the cost. In the towns where this is not as yet an accomplished fact we confidently expect that the power of example will be sufficient for them to enter such a plan in the near future.

It is obvious that we will have a heavy load of clerical work. We will supply the dentist with a public health trained dental nurse and adequate clerical help. But we know that an examination of the child and a notification of defects to the parent will not be enough. We propose an adequate follow-up system through the teacher, public health nurse in the school, and the dentist.

So much for the school child; but there are other groups we want to integrate in this plan. In all our five towns we have Child Health Centres. These are for infants and pre-school children. Once we have our school program well under way we will turn our attention to this younger group. We would plan to have a regular dental examination of these children together with an educational program for the mothers. I think that this group offers us our real hope for success. To illustrate how valuable education to this group can be one need only think of the use of vitamin D. It is through the efforts of Child Health Centres, paediatricians, and family physicians that the use of cod liver oil products has become almost universal for the growing child. The mother of the infant and pre-school child is in a most receptive mood and good dental public health education directed toward her will be most successful.

We have made our approach to the groups we think we can benefit, the pre-school and the school children. But it will be of little use to define our problem unless we are prepared to convince those who have the ultimate decision in whether this care will be given. Therefore, we must concentrate on the parents of these children. If we do not convince them of the need the success of the plan will be extremely uncertain. I think the following sweeping statement is true. The average parent in Ontario does not appreciate the importance of proper care of the deciduous teeth and has no idea that they should have at least as good care as the permanent teeth. If it were not for the fact that I think I am doing both the child and the parent a real service by a careful explanation I would grow exceedingly weary of the oft-repeated statement. "But Doctor, they are only baby teeth!"

The very fact that we will routinely examine the children's teeth and notify the parent of our findings will be an educational experience for the parent. We have found in immunization work that example and repeated notification have changed many passive resistors into cooperators. I think this would also be true in regard to preventive

dental care. This would not be enough. There would have to be a more direct contact with the parent. This can be accomplished in a variety of ways. None of them will reach all parents but a judicious use of all the means will reach most of them. I have told the veterinarians that one of their prime duties in public health is education. The same is true of the public health trained dentist. He will have to use every means at his command to get his message across to the parent. He will use Home and School Associations, Service Clubs, Women's Institutes, Farm Forums, Junior Farmers, and every other group in the community where he can teach dental health. In our county we have a most cooperative group of local newspapers. They welcome well-written material. This is an avenue of education which cannot be forgotten. He will use the spoken word, he will use films, he will use visual educational material, he will use every educational tool he can devise. In short, he will take advantage of every contact to broadcast his message.

But his educational program cannot stop with the child and the parent. There is another group he must work with; that is the practising dentists in the community. He must imbue them with the preventive philosophy. Not only have we all met the parent who considers the teeth unimportant because they are deciduous but we also have all encountered the mother who tells us that her dentist says, "Just leave them until they come out". It may have been the parent's fault that the mouth got into such a sorry state but surely that does not justify leaving the child with a mouthful of decayed, diseased teeth. Most dentists are now eager to learn. Many graduated before there was adequate teaching in children's dentistry. It will be the responsibility of the public health trained dentist to see that the man in practice has the opportunity to learn these newer advances. I see no reason why he cannot arrange for field demonstrations through this Association and the College. I assure you we will make every effort to see that this is done. I anticipate the public health trained dentist will be welcomed by his col leagues in private practice. I think he can do much to help them.

In such a brief presentation it is impossible to give you more than the bare bones of our plans to improve the dental health of our children. Suffice it to say that we are not satisfied with the present state of affairs and that we hope we may, in our small way, do something to improve it. We believe that to implement such a program a dentist trained in public health is essential. His efforts will be educational and directed to the pre-school child, the school child, the parent, the practising dentist and the community as a whole. It will take years to assess the success of our effort. However, we are firmly convinced that the preventive approach to dental health is the only hope for our children and for the generations to come.

ANNOUNCEMENT

University of Toronto, Faculty of Dentistry

CONTINUATION COURSES FOR GRADUATES IN DENTISTRY

Endodontia **December 5-9, 1949**

During the week of December 5, a postgraduate course in Endodontia will be held at the Faculty of Dentistry, University of Toronto. There are times when conservative treatment of the pulp-involved tooth must be undertaken with delay and too often the dentist suffers more mental agony than the patient.

The course is designed to give practical instruction and will assist the practitioner to perform the operation efficiently and economically. Dr. Ralph Sommer, Professor of Dentistry, who is in charge of the Department of Root Surgery, at the University of Michigan, has accepted an invitation to spend a day with the group. Dr. Sommer is a dynamic speaker, and his lectures illustrated by slides and movies are long remembered by those fortunate enough to hear him.

NEW METHODS OF REPAIRING ACRYLIC DENTURES WITHOUT DISTORTION*

by D. R. CHRISTIE,† M.A.

Introduction

One of the most important disadvantages of the use of methyl methacrylate resins for denture bases is the fact that the dentures almost invariably distort during any repair process which may have to be carried out at relatively high processing temperatures. Such operations as the replacement of teeth, the welding of a fracture or the relining of a lower denture are all common procedures.

In all these procedures distortion of the denture base and a corresponding change in the occlusion of the teeth occur to a degree dependent on the recuring temperature. Repairs are most frequently made at temperatures of 160-165°F, but in some rush cases a temperature of 212°F may be employed. (Fig. 1) A brief quantitative study was made to determine the extent of the distortion caused by repairing denture blanks at the temperatures mentioned above. Four denture blanks were invested in plaster and heated at 160°F for 6 hours while four other blanks were similarly treated at 212°F for half an hour.

The dimensional changes produced in these denture blanks are shown in Table I.

TABLE I

Percentage Decrease in Dimensions

Denture	After 6 hrs. at 160°F		After ½ hr. at 212°F	
	Flange	*Ridge*	*Flange*	*Ridge*
1	.49	.44	.98	.87
2	.49	.44	.98	.88
3	.49	.45	.98	.89
4	.49	.44	.98	.89

It is a simple matter to show these distortions without actually preparing the denture for a repair. A cast and an occlusal index can be made of the original denture. Then all that is required is to invest the denture in a flask and heat it for, say, ½ hour in boiling water or overnight at 160°F.

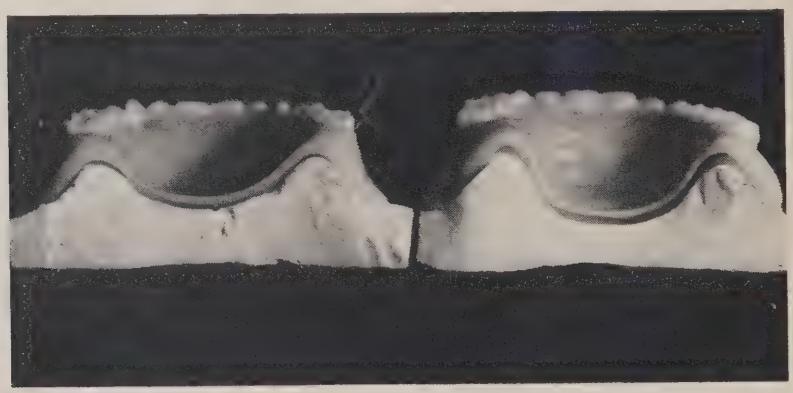

FIG. 1

Left: Distortion caused by repairing at 165°F for 6 hours.
Right: Distortion caused by repairing at 212°F for ½ hour.

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The two treatments can be investigated with the same denture, provided a new cast and index are made after each "repair," for each subsequent heating produces additional distortion.

These changes are severe enough to affect seriously the adaptation of dentures to stone models and occlusal indices made immediately before the repairs. (Fig. 2).

FIG. 2
Occlusion of denture shown at right in Fig. 1.

Before proceeding, a brief explanation of some of the photographs in this paper would be in order. The photographs are intended to convey as well as possible the adaptation of repaired dentures to their respective casts and occlusal indices which were made before the repairs were begun. It is difficult to show the occlusion of a denture on its index. However, the teeth on one side of a denture will fit the corresponding side of its index and those on the opposite side will not fit the opposite side of the index if there has been any distortion. It is possible, then, to show the adaptation by photographing the teeth on one side of the denture when the teeth on the other are fitting the index properly. Any gap between the teeth and the index in the photograph will be a qualitative indication of distortion. If there is excellent adaptation to the cast, there is always a good fit on the occlusal index.

Low-Temperature Repairs

Unless temperatures of 160°F or higher are used, it is difficult to polymerize the new denture base material to the same strength as the original material in a convenient time by the usual processing methods. However, new methods of affecting repairs using even lower temperatures have been devised and their useful applications and details will be described.

Recently several commercial brands of denture repair materials for use at room temperature have been introduced. The principle of making repairs at room temperature is quite sound and is to be commended. Tests of one of these repair materials showed that it did not reach, even after several weeks, the hardness of thermally cured methyl methacrylate although it quickly attained a strength sufficient to meet A.D.A. specifications. It is possible to make satisfactory repairs with these materials but there is a tendency for porosity to occur when least expected or desired.

Repairs at 135°F

Experiments here have shown that a temperature range of 135±2°F is the most suitable for making repairs. Temperatures slightly above this range cause minor dimensional changes while the use of lower temperatures requires a long curing period. If the ordinary powder and liquid brands of commercial denture base materials are processed at 135°F a satisfactorily strong polymer cannot be made within a practical time period. The principal reason for this is that the monomeric components contain a polymerization inhibitor, usually hydroquinone. It has been found that if the inhibitor is removed, an adequate cure can be made by processing at 135°F for 16 hours.

Dentures which are repaired under these conditions undergo virtually no distortion and show excellent adapta-

tion to models and occlusal indices made immediately before the repair. (Figures 3 and 4) This procedure is

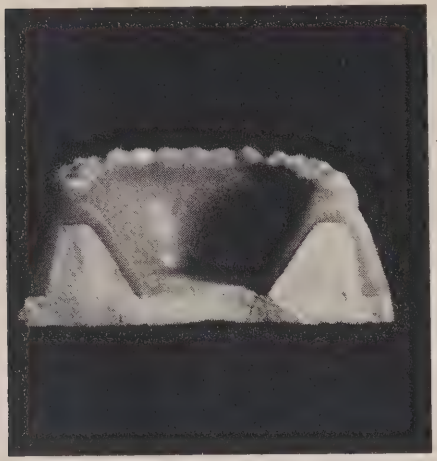

FIG. 3
Denture repaired at 135°F for 16 hours.

FIG. 4
Occlusion of denture shown in Fig. 3.

recommended for the replacement of teeth, for fractures and rebasing upper dentures. Relining of lower dentures by this method is not considered perfect because a slight distortion occurs. However, this low-temperature method causes less distortion than other methods employing higher temperatures and the small shrinkage may have little clinical significance. The relining problem will be dealt with more fully in a later section.

If the period of 16 hours which is required seems an inconveniently long time, it should be remembered that most dental laboratories prefer to make their repairs by overnight processing so that their actual working hours can be devoted to denture preparations and other details. The 16-hour repair time is well suited, then, to this routine.

The polymerization inhibitor can easily be removed from the monomeric methyl methacrylate by simple distillation of the monomer or perhaps more conveniently for dentists and dental technicians by washing. One volume of a dilute solution of sodium hydroxide (a concentration of 5 per cent is suitable) is mixed with about 4 or 5 volumes of monomer, preferably in a separating funnel. The two liquids are shaken together and the aqueous layer becomes dark brown in colour as the hydroquinone is oxidized. The heavier aqueous layer is separated from the monomer which is then washed two or three times with distilled water in the same separating funnel. The monomer is finally dried in another vessel by the addition of a small amount of plaster of Paris with subsequent agitation. Filtration completes the preparation of the inhibitor-free monomer which can be stored at room temperature for an indefinite period provided dark-coloured bottles are used.

The inhibitor-free monomer and ordinary polymer powder are mixed in the same manner and in the same proportions as specified by the manufacturer. In order to improve the hardness of the polymer which is produced by processing at 135° F. for 16 hours, it is recommended that a small amount, about 0.1 per cent, of benzoyl peroxide catalyst be dissolved in the monomer just before mixing. The mixture goes through the usual sandy, tacky and doughy stages and is used in exactly the same manner as any powder-liquid mixture.

A quantitative study was made of the Knoop hardness numbers and transverse strengths of the polymers formed from powder-liquid mixes by curing at 130° F. for 16 hours. These values are shown in Table II.

TABLE II

Monomer Used	Catalyst Added	Number of Specimens	Cure Time at 135°F	Knoop Hardness[1]	Transverse Strengths[2]		
					Deflections in mm. at		Aver. Max. Load
					4000 gms.	6000 gms.	
Commercial brand containing hydroquinone	—	3	10 hrs. at 160°F	12.0	2.1	4.3	6900
	—	3	24 hours	13.8	2.5	6.1	6500[3]
	—	4	16 hours	13.7	2.5	—	5850
Inhibitor-free	—	4	24 hours	13.2	2.4	5.6	6700
	—	4	16 hours	13.2	2.4	5.9	6650
	benzoyl peroxide	4	16 hours	15.5	2.4	5.5	6750

[1] Material cured up to 212°F has a hardness of 17-18.

[2] Deflection at 4000 grams load must be less than 2.6 mm., at 6000 gms. between 3 and 8 mm. and the average maximum load must be at least 6000 grams.

[3] Failed to pass transverse strength test.

It will be seen from the above table (i) that no relation appears to exist between surface hardness and transverse strength, (ii) that it is necessary to remove the inhibitor to gain satisfactory strength in a polymer cured at 135° F. for 16 hours, and (iii) that benzoyl peroxide should be added to increase the surface hardness.

This work has been confined to monomer-polymer mixtures and the figures in Table II refer to these mixtures. The commercially-available premixed gels do not lend themselves to the modifications necessary for low-temperature polymerization. The fact that they have to be trial-packed at elevated temperatures is another feature which we wished to avoid, but which may not cause any serious distortion in the short, trial-packing period. Table II also shows that unmodified monomer-polymer mixtures are not sufficiently strong after curing for 16 hours at 135° F. It is claimed, however, that premixed gels have superior strength characteristics to those of powder-liquid mixtures and it may well be that the gels are strong enough when cured under the above conditions.

Repairs At 135° F. With Ultra-Violet Light

In order to complete repairs within the period of a working day, it was necessary to reduce the processing time to something approximating four hours. A study of the polymerization of methyl methacrylate under the influence of ultra-violet radiations indicated that it is practicable to effect complete polymerization in this time.

Methyl methacrylate can be polymerized by the action of intense ultra-violet radiations, particularly those shorter than 3000 A°. There is at least one existing patent[1] on the polymerization of light-activated dental materials by radiant energy which claims that this energy may lie suitably between 1800 and 7000 A°. In our experiments we found that wave-lengths longer than 4000 A° or beyond the ultra-violet region of the spectrum are of no importance. With a moderately intense source of ultra-violet radiations, we found that polymerization could be completed within a period of 1 to 2 hours. Increasing the intensity of the source causes a corresponding reduction in the curing time. This photo-polymerization is accelerated by increased temperatures and certain light-activated catalysts (which are not indispensable) which in turn activate the monomer molecules by the transfer of absorbed energy. Diacetyl, benzoin, and even benzoyl peroxide to

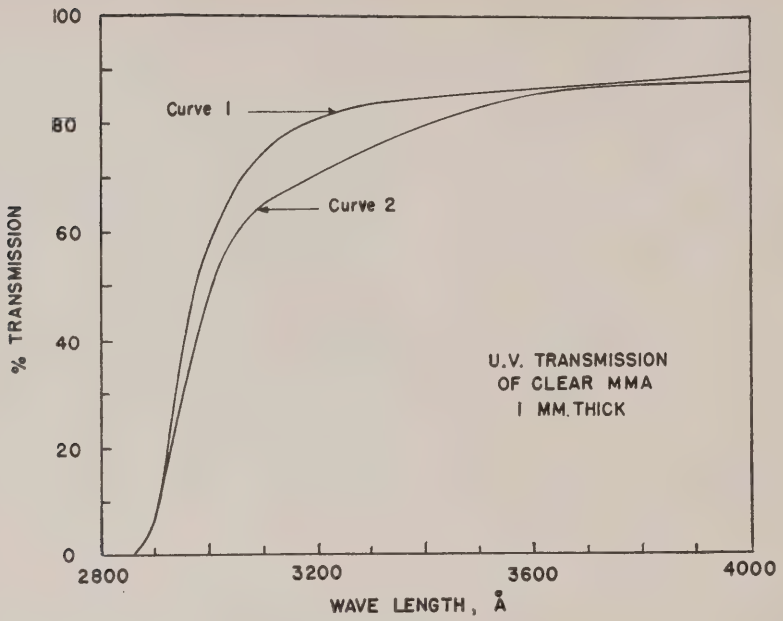

FIG. 5

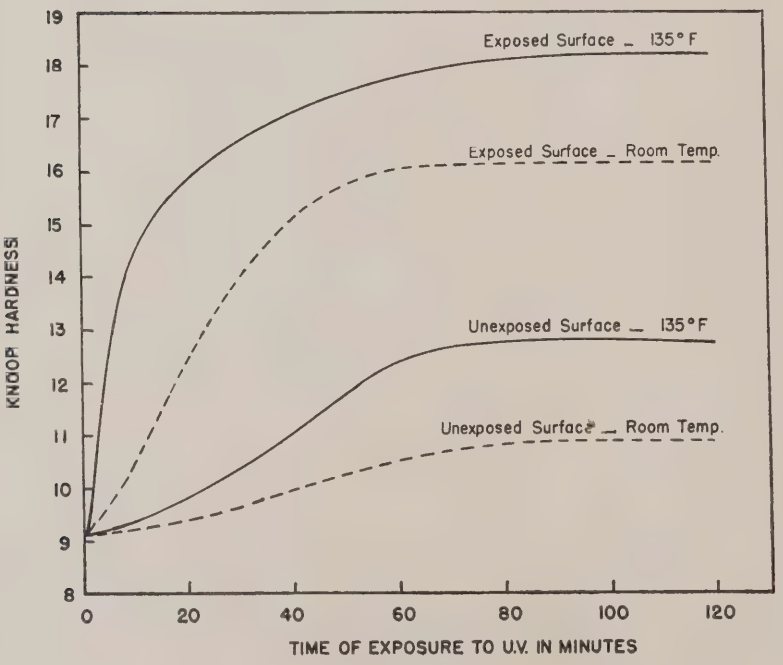

FIG. 6

some extent are examples of these catalysts.

Curve 1, Figure 5, shows the ultraviolet transmission curve for clear

methyl polymethacrylate (MMA), approximately 1 mm. thick. Practically all incident radiant energy below 2900 A° is absorbed. Curve 2, Figure 5, shows the transmission curve for clear methyl polymethacrylate of the same thickness containing 0.1 per cent benzoin. Here, the absorption of energy has been increased by the amount shown between the two curves.

A study of Knoop hardness numbers of methyl methacrylate is indicative of the degree of polymerization. In Figure 6 are curves showing the surface hardness values of pink methyl methacrylate denture base material, 3 mm. thick, after exposure to ultra-violet radiations at approximately room temperature and at 135° F. Knoop hardness numbers were determined on both the ultra-violet-exposed surfaces and on the unexposed surfaces after definite periods of irradiation. At 135° F. both surfaces reach their respective maximum hardness values after approximately 80 minutes. At room temperature about the same time is required but the maximum hardness never becomes as great as at 135° F. In other experiments with specimens about 3 mm. thick, it was found that the hardness varies almost linearly with the thickness of the denture base material from a maximum of 18.2 on the exposed surface to approximately 12.5 on the unexposed surface.

In these experiments the source of ultra-violet radiations was a 250-watt mercury vapour lamp designated as a UA2 lamp by the Canadian General Electric Company. It was suitably installed in a stainless steel shield and preferably operated in a fume cupboard or a well-ventilated room where the ozone produced during its operation could be carried away.

The following procedure is used in making denture repairs. The case is prepared and packed with new resin in the customary manner. It is preferable to use a monomer-polymer mixture which has had the inhibitor removed from the monomer and 0.1 per cent of both benzoin and benzoyl peroxide added to the monomer. The benzoyl peroxide serves as a thermal catalyst during the preliminary heat treatment which must be used before irradiation. The flask is placed in a water-bath at 135 deg. F. for two hours during which time the new material is partially polymerized and assumes a fairly rigid condition.

At the end of the 2-hour preliminary heat treatment, the flask is opened to expose the area being repaired. If there are no undercuts, the flask may simply be separated into its two halves. If there are undercuts present and they usually occur when new material has to be added to both the buccal and lingual sides of teeth, then the tooth-side of the investment must be cut away carefully until the teeth in question are free, whereupon the flask may be opened.

Clean off any adhering plaster from the area of new material but leave the rest of the lower half of the investment covering the denture. The flask is now immersed in the water-bath at 135 deg. F. once more. The water level should be at the rim of the flask and should not cover the new denture base material. The ultra-violet lamp is then placed about 6 inches from the flask and the denture irradiated for 1½ hours. At the end of this time, the repair is finished and the denture may be removed and polished.

By this technique, dentures have consistently been repaired with no evidence of distortion. Perfect adaptation to casts and occlusal indices made before the repair was started can be obtained. (Figures 7, 8 and 9) The total processing time is only 3½ hours.

Repairs of fractured dentures and the replacement of teeth can be carried out quite conveniently. The method is not suited to relining or rebasing chiefly because of the necessity for opening the dental flask after the preliminary heat treatment to expose the tissue side of the denture while the tooth-half of the investment remains untouched. If undercuts are present, as they frequently are, the opening of

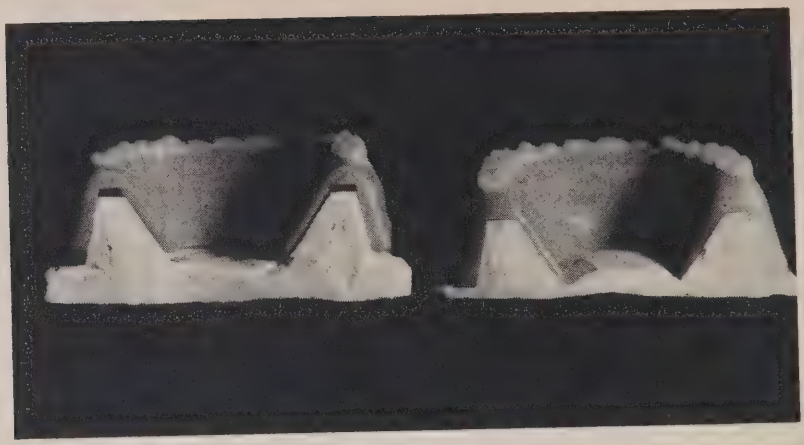

FIG. 7

Left: Fracture repair made at 165°F for 16 hours followed by tooth-replacement repair under the same conditions.

Right: Fracture repair by infra-red method followed by tooth-replacement repair by ultra-violet method.

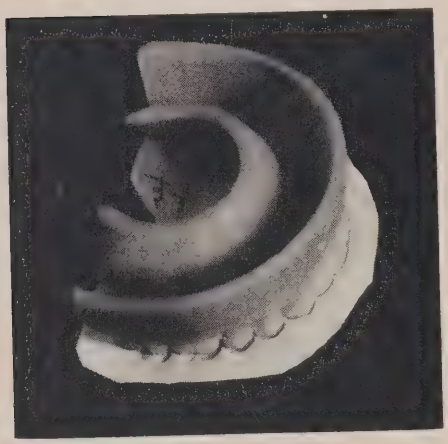

FIG. 8

Occlusion of denture shown at left in Fig. 7

FIG. 9

Occlusion of denture shown at right in Fig. 7.

the flask is a difficult problem and a time-consuming obstacle.

The initial cost of the ultra-violet equipment is moderate. The lamp, which is almost half of the initial investment, need only be replaced after about 2000 to 3000 hours of service. At this rate its operation would amount to about one cent an hour. The only other piece of equipment required is a water bath with a thermo-regulator to maintain the temperature at 135 deg. F.

Repairs at 135°F with Infra-Red Light

One other rapid repair method has been worked out with considerable success. It is recommended only for fractures and the replacement of teeth. (Figures 7 and 9).

The details of this method are quite similar to the ultra-violet technique. Instead of using a light-activated catalyst, a thermal polymerization accelerator is used and the final rapid cure is obtained with an ordinary

commercial infra-red lamp of 250 watts.

The method makes use of a process first developed in Germany during the war[2]. It was found that tertiary aliphatic and aromatic amines, in conjunction with benzoyl peroxide were powerful accelerators of the thermal polymerization of methyl methacrylate. The mechanism of the reaction is obscure, although it is believed that the tertiary amine oxide formed reduces the critical polymerization temperature. Tertiary aliphatic amines, such as trihexylamine are slower reacting but cause less discolouration than the tertiary aromatic amines, e.g., N,N-dimethylaniline. (A two per cent solution of dimethylaniline in methyl methalcrylate monomer will cause polymerization of a monomer-polymer mixture at room temperature in 15-20 minutes, unfortunately with considerable discolouration).

The use of a new group of materials such as the tertiary amines naturally raises the question of possible toxic effects. As far as we know there are no experimental data on this subject. It would appear unlikely that any adverse effects would result because relatively small quantities would be involved in any case. We are not aware of any clinical reports of toxicities developing because of the use of acrylic filling materials at least some of which contain tertiary amines[3].

The monomer used in this method is free of hydroquinone inhibitor and contains 3 per cent trihexylamine. Before mixing with polymer a small amount (about 0.5%) of benzoyl peroxide is added and dissolved.

The denture is prepared and packed as usual and the flask immersed in a water-bath at 135°F for 2 hours. At the end of this time the flask is opened, observing the same precautions outlined in the ultra-violet method. The lower half of the investment is then covered with tinfoil, except for the exposed repair area, to act as a reflector of the infra-red radiations and to prevent the denture from being overheated. The repair is placed about 6 inches from a 250-watt infra-red lamp and exposed to its radiations for about five minutes. When the flask cools, the denture may be removed and polished. Processing time is therefore just over two hours.

Rebasing and Relining

The operations of rebasing and relining are commonly considered as repairs. Rebasing, as carried out by most dental laboratories, replaces almost all of the original denture base material except that supporting the teeth. It is most frequently encountered in connection with upper dentures. Under these circumstances, rebasing could be considered as the making of a complete new denture. However, because of the presence of some original denture base material in a most important area, it would be sound practice to follow the procedure outlined previously for making repairs at 135°F for 16 hours. This is the only method recommended in this paper for rebasing upper dentures.

Relining, most frequently performed on lower dentures, is distinct from rebasing in that only a small proportion of the original denture base is replaced. For this reason, it can be thought of as a true repair. Complete lack of distortion has not been obtained in reline cases. The reasons for this are not clear but are probably due to the complicated shape of the denture and to the strong shrinkage forces set up during the polymerization of the added resin. Despite the lack of perfect stability in relining, in our experience there are two methods of relining lower dentures which are superior to other methods employing higher curing temperatures. (Figure 10) The first of these two techniques is, of course, to carry out the reline at 135°F for 16 hours. (Figure 11) The second is to use for the reline material a monomer polymer mixture containing added benzoyl peroxide and 3 per cent trihexylamine in the monomer and cure at 135°F for at least 3½ hours. The relining problem is being investigated further and any additional data will be presented in a future report.

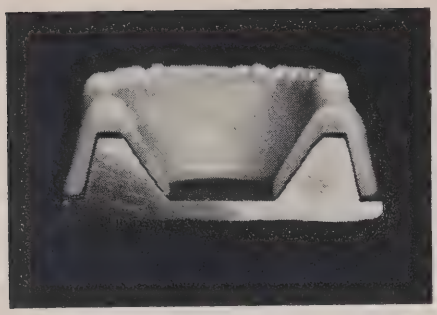

FIG. 10
Denture relined at 165°F for 16 hours.

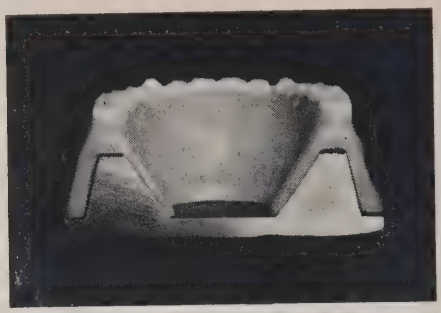

FIG. 11
Denture relined at 135°F for 16 hours.

Summary

This report summarizes investigations concerning the distortion of methyl methacrylate dentures under repair conditions.

Low temperature curing methods are discussed and a modification of the usual repair process is suggested for making repairs overnight without distortion.

A short repair method employing ultra-violet radiations is described whereby fractures and tooth-replacement repairs can be finished in 3½ hours.

An infra-red method using a tertiary amine catalyst is presented, showing in detail how repairs can be completed in about 2 hours.

The subjects of rebasing and relining are discussed and satisfactory methods for making these types of repairs are suggested.

Acknowledgment

This research was under the general direction of Mr. O. J. Schierholtz of the Ontario Research Foundation. The kind co-operation and advice of Dean Ellis, Dr. R. J. Godfrey and Dr. J. R. Fletcher, of the Faculty of Dentistry, University of Toronto, is gratefully acknowledged.

References

(1) Can. Pat. 440, 240 (1947).
(2) "Recent German Developments in the Field of Dental Resins," F.I.A.T. Final Report, 1185.
(3) Leader, S. A., Br. Dent. Jour. 84, 214 (1948).

ANNOUNCEMENT

Fédération Dentaire Internationale
Annual Session of 1950

At the last meeting held in Milan, the Executive Council of the Fédération Dentaire Internationale accepted the invitation of the French National Committee to hold the next annual session in Paris.

The Council is glad to be able to accept this invitation as it will give the opportunity to celebrate in a particularly brilliant way the 50th birthday of the foundation of the Federation. It was in the year 1900 and due to the efforts of the late Dr. Godon that our Institution was born.

The Committee of Organization is drawing a most interesting program for that celebration, which will take place at the end of July. Moreover, it has been decided that at the same time will be held the session of the Paris Dental Week, which takes place usually in November but will be fixed up at the end of July on that occasion.

This arrangement of two important scientific manifestations will thus induce a great number of members and friends of the Federation to be present, the dental week which will be devoted to scientific work assuring them that the program and the results will be particularly interesting.

The French Committee of Organization is under the presidency of Dr. Jean Deliberos.

The practitioners interested in these scientific meetings will receive in due time, following the development of the scheme, all relevant information.

The Forum

DENTAL CARIES IN NORWEGIAN CHILDREN DURING AND AFTER THE LAST WORLD WAR. A PRELIMINARY REPORT

by GUTTORM TOVERUD, Ph.D., Professor of Pedodontia, The Dental School of Norway, Oslo

Condensed from Proceedings of The Royal Soc. of Medicine, April, 1949

A preliminary report is submitted on the occurrence of dental caries in Norwegian children, during and after the World War.

Dental examinations of 8,000 to 9,000 school children from different parts of Norway have been carried out each year from 1940 to 1948. It is concluded from the statistical results of the investigation that the caries frequency decreased steadily from year to year during the war. The reduction in the number of carious tooth surfaces per child from the beginning of the war to the lowest number some time after the war ended amounts to 50 to 75%.

A study has also been undertaken on 600 to 700 children, 2½ to 7 years old. The results in this younger group show even a greater reduction.

From 1946 the caries frequency has increased again in the school children as well as in the pre-school children. In both groups the increase is statistically significant.

The cause of the decrease in caries frequency during the war and the cause of the increase after the war is discussed. Based on rationing of the various food articles our tentative conclusion is that the decrease may be attributed to the lowering in consumption of refined carbohydrates and the increase in consumption of more natural foods, i.e. protective foods. This may have resulted in an increased resistance of the teeth and a reduction in the local factors which produce decay.

More detailed studies of the change in caries frequency as well as of the change in food consumption and habit of living during and after the war are necessary before a definite conclusion can be drawn. Such studies are being continued.

During the war nearly all food articles were rationed. Milk: Pregnant and nursing women, and children up to 6 years of age, were allowed 0.75 litre per day. It was not always possible to get that amount; however, it is believed that the children mostly did, as the mothers were very anxious to give it to them. Children from 6 to 16 years of age were allowed only 0.5 litre per day. Teen-ages from 16-18 were allowed 0.25 litre of whole milk and 0.25 litre of skimmed milk. Adults had just 0.25 litre of skimmed milk.

Cod-liver oil—Preference was given to pregnant and nursing women and pre-school children. School children also had access to cod-liver oil but not as regularly as the groups mentioned. Cheese was very scarce and indeed non-existent for several months. There was no cream. The margarine ration was very low: 30 grammes per day including some butter now and then. Meat and pork were rarely obtainable on coupons. Fresh fish was difficult to obtain, whereas herring and salted and dried fish were more plentiful.

The consumption of potatoes was greater than usual. Vegetables, particularly turnips and carrots, were also more in use than in previous years. The bread ration was far too small for growth and for heavy work. The flour was of 95% extraction and 0.4% calcium-carbonate was added from the end of 1942. A whiter bread was given only on a medical prescription. The bread was not allowed to be sold before it was twenty-four hours old.

The sugar ration was about 30 grammes per day from 1940 and throughout the whole war period. Some sugar was allowed for canning and by adding this, the whole sugar ration amounted to about 37 grammes per day as an average. The sugar ration to bakers and industrial concerns was constantly lowered during the war, so that the ration in 1944 just amounted to a quarter of what was used in 1939 for bakers and to one-eighth for industry. The result was that sugared cakes, chocolate, candy, and marmalade disappeared from the market. During the last two to three years of war, candy was not available at all.

Coffee and tea were substituted by home products.

If we compare the food during the war with the previous years, it is found that the average daily consumption of whole milk, meat, fat, fresh fish, bread and flour, fruit, sugar and sugar-products, coffee and tea was much lowered, the daily calorie-intake, too, was lowered, the milk producers, however, used as an average more milk and butter than usual. The same is probably true of meat and fat.

THE DENTISTS' CONTRIBUTION TOWARD A COMPLETE HEALTH SERVICE

by SAMUEL CHARLES MILLER, D.D.S., F.A.C.D., F.A.D.M.

Condensed from Jour. of D. Medicine, July, 1949

Much has been said and written about the medical cooperation required by the dentist. This would lead us to believe that such an approach takes only one direction. Yet so many instances arise where the dentist can be of incalculable aid to the physician in rendering a full health service that the alert medical practitioner is showing an ever-increasing interest in problems of the oral cavity. The alert dentist has often discovered deficiencies of riboflavin, iron, ascorbic acid, vitamin A and parts of the B complex by the characteristic changes occurring in and about the oral cavity, thus allowing early treatment before irreversible processes occurred.

The medical administration of dihydrotachysterol (hytakerol), a powerful form of vitamin D, as it is used for elevation of the serum calcium, withdraws this material from the bony structures. Since the alveolar process is the most susceptible to such change because of its small size and its vigorous function, the dentist may suddenly be confronted with loosening of the teeth accompanying such therapy. The direct local effect of the physical and chemical properties of the dietary on oral function and favourable dental environment must be emphasized for the physician. The latter may advise lemon and hot water in the morning without realizing the ensuing harm from sensitization, decalcification and destruction of the teeth. He may recommend such preparations as chocolate milk, cocomalt, ovaltine, or calcium wafers to increase the consumption of milk or calcium only to create rampant caries of the teeth from the local environmental effects of such materials. He may prescribe a soft bland diet for gastrointestinal disorders only to create periodontal and dental diseases far out of proportion

to the medical benefit derived from such therapy. The Kempner diet for hypertension and faulty renal function will undoubtedly create a dental problem since it consists essentially of rice, fruits and white sugar.

Recently a senior student at New York Univeristy College of Dentistry in checking a patient's diet found that she was subsisting on 700 calories daily. On questioning, the student was told that the physician recommended a low fat diet and for that reason such limitation was imposed. Upon consulting with the physician the student discovered that the patient had misunderstood the physician's advice with resultant harm. She at that time weighed 85 pounds. The physician's kind letter was a just reward and encouragement for this senior student.

Local Disease Creating Systemic Effects

Focal infection has been so maligned and misunderstood in the recent past that one hesitates to mention it in a scientific presentation. Yet since it is realized that the simple act of chewing on periodontically involved teeth creates a shower of bacteria and toxins into the blood stream, it is easy to understand the exacerbations of subacute bacterial endocarditis and other diseases in such cases. Simple prophylactic procedures, extraction of periodontically involved teeth, or treatment of pericoronal flaps may create serious systemic sequelae by absorption or extension. The moderate case of periodontal disease involves a pocket surface area the size of a post card. The amount of histamine produced in such a large area and its effect on peripheral circulation, the gastrointestinal tract and allergies is beyond question.

The impairment of health through the discomfort or interference with chewing by bad natural or artificial teeth, the frequent occurrence of cancer and primary lesions of many diseases in the mouth command the mutual interest of both professions. The rhinologist and laryngologist make frequent use of the dentists' diagnostic and therapeutic skill in related cases.

Who can differentiate changes in the oral tissues better than one who is continually engaged in this field of operation?

Temporomandibular Joint Disturbances

Nowhere have we been more ignorant than in the understanding of effects of temporomandibular joint disturbances. Until the dental profession developed the diagnosis and treatment of temporomandibular joint disturbances, such patients haunted the otologist because of the proximity of his field to the seat of pain. Often these distraught people reached the psychiatrist. Neither could do much since the correction of occlusal abnormalities was not in their field. Trifacial neuralgia, vertigo, tinnitus, fainting and many other previously unrelated symptoms have been traced to temporomandibular joint disturbances. Now both professions are pleased by the remarkable relief of such symptoms in many cases when appropriate dental therapy is administered.

A pointed case is reported by Barret of the woman who consulted many medical and dental practitioners for excruciating pain in the region of the temporomandibular joint. The probability of enucleation of the disk was one of the treatments considered. Upon the breaking out of an amalgam filling that had been in traumatic occlusion, all the pain disappeared.

Psychosomatic Factors

Can anyone minimize the importance of dental aesthetics to the mental well-being of the individual? The loss of teeth may create a castration complex as mentioned by Stekel, and emphasize aging and impending death. Such changes many make the patient a social hermit. The metamorphosis of the practically speechless, retiring, cleft palate sufferer to a sociable pro-

ductive individual after the insertion of an obturator points up the importance of dental treatment. The reclamation of the wife of a university professor who resigned as president of her alumnae association and went into seclusion because of a space of about ⅜ of an inch that appeared between the two upper central incisors within six months and her return to normal social intercourse after a combination of orthodontic and periodontic service, is another of thousands of examples.

The mouth is an important zone of erotic activity and many emotional stresses are first revealed in the mouth through rumination, clenching, and such habits as finger nail-biting, pencil-biting and insertion of foreign objects into the mouth.

The many cases of diabetes and other endocrinapathies, the blood dyscrasias and the myriad diseases first discovered by the dentist are a tribute to his awareness of his full responsibility as a health practitioner. He is ready for and welcomes the co-operation of his confrère, the physician.

57 West 57th Street.

ANNOUNCING

THE ANNUAL CONVENTION

of

THE CANADIAN DENTAL ASSOCIATION

in co-operation with

THE ONTARIO DENTAL ASSOCIATION

(83rd ANNUAL MEETING)

MAY 14, 15, 16, 17, 1950

ROYAL YORK HOTEL, TORONTO

Associate with men of good quality, for it is better to be alone than in bad company.—George Washington

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Editorial

HYPNOSIS IN DENTISTRY

In Winnipeg early in September Dr. A. A. Papermaster of Fargo, North Dakota, discussed the subject of hypnosis before a limited number of Winnipeg dentists stating that interest in this subject was aroused in his district about eighteen months ago by Dr. Thomas O. Burgess, Professor Psychology at Concordia College, Moorhead, Minnesota. He also stated that Dr. Burgess who had been using and experimenting with hypnosis as a clinical psychologist for the past twenty-five years demonstrated his methods to a group of dentists and that after they were trained by him they formed the American Society of Psychosomatic Dentistry.

On September 29 Dr. W. T. Heron, Professor of Psychology of the University of Minnesota, spoke on "Hypnosis in Dentistry" before a well attended meeting of the Winnipeg Dental Society at which meeting a number of medical men were in attendance. One twenty-hour course has already been given by Dr. Heron to a limited group of Winnipeg dentists and a similar course is being arranged for at an early date. Dr. Heron stated that hypnosis is a perfectly natural phenomena, and occurs spontaneously and naturally to some degree in every normal individual, that we have all become so interested at times that all else save that to which we are attending is for the moment shut out, that the hypnotic state is something like this condition except that some control can be exercised by another person, namely the hypnotist. By the use of words he can apparently automatically control the behaviour of the individual within limits. He said that in the last five or six years there has been a great increase in interest in this subject and that most of the entertainers in this field have disappeared, that in some states such entertainments are illegal and that in Europe they are largely prohibited. Dr. Heron emphasized the value of post hypnotic suggestion such as to leave a

suggestion with the patient that the use of sugars be restricted in the diet. It was mentioned that in this state the patient is relaxed, time passes very quickly and the experience is very pleasant, that this method can be used to advantage in about 85 per cent of normal people who are willing to co-operate. It was stated that the public are not educated to this procedure but that in centres where it is being used these erroneous ideas fade away very rapidly. Dr. Heron said that there was no harm to the patient and that the technique should be taught in all dental and medical schools and that it would be taught very soon. He stated that this procedure should not be attempted until one had given it serious study, that it was effective with children as young as six years of age but that it should never be used on a minor without the consent of the parent or guardian. Whether or not one believes in the use of hypnosis in the practice of dentistry this lecture proved very interesting.

It is a well known fact that people can be taught to, shall we say, hypnotize themselves and certain experts are at present training expectant mothers in some localities in this technique. Not long ago I received a letter from a confrère in India stating that upon the day of writing he had had some Hindu holy man in his chair and that this patient was faced with an operation which would ordinarily demand a local anaesthetic. This patient said "I don't want an anaesthetic, just give me a few minutes and you can do what you like." In a very short time the patient said "Now I am ready" and the operation was performed apparently without any pain. These are matters upon which nearly all dentists know very little.

At present it would seem that the dentist hypnotist would hardly provide the atmosphere in which most dentists would feel at home. Hypnotism was introduced to medicine by Franz Anton Mesmer, a physician of Vienna 150 years ago, and Mesmer himself is said to have learned the technique from a Catholic priest who used it to exorcize devils. Finding medical resistance in Vienna Mesmer moved to Paris only to meet the same fate there and a commission adjudged him a fraud. Since then many respectable physicians and psychologists have developed the technique of hypnotism and added to the knowledge of its physiological nature.

In medicine it is used particularly to control the pain of childbirth. It is also used in the treatment of the neurotic and would seem to have value according to an editorial in the *British Medical Journal* of August 20 of this year in the treatment of hysterical anaesthesias, pareses, spastic conditions, and amnesias and that it might prove of value in the treatment of such single symptoms as headache, insomnia, tics, stammer, or enuresis. According to the same editorial there is no evidence that in capable and conscientious hands hypnotism, repeated as many times as desired, carries with it any physical or psychological danger to the patient.

In the closing paragraph of this British editorial we read the following, "Above all it seems desirable that hypnotism should be investigated more thoroughly along neurophysiological lines. The systematically applied interest of trained and critical minds might do much to clear up present obscur-

ities, remove unfavourable impressions and increase understanding of higher cortical activity in the brain."

With the suggestion that further investigation of this subject be undertaken this writer thoroughly agrees even though at the present time he is not prepared to place himself in the hands of any hypnotist for experimental purposes. If this treatment is of real value then much educational work will be required on the part of the public as well as the members of the profession. Furthermore the methods of education should be very carefully scrutinized lest our profession be brought into disrepute. M. H. G.

CORRESPONDENCE

Gum or Tobacco?

Recently an article appeared in the daily press which, quite frankly, disturbed me. It quoted Dr. D. P. Mowry of McGill University as saying, "if your children must chew something, and you do not want them to chew gum, give them a chew of tobacco."

I know how easily the press can quote or misquote, and throw the public into an unnecessary panic; so I hasten to reply with the hope of shedding some light on the subject.

I was born in a tobacco district, and my brother-in-law was president of a tobacco firm that manufactured chewing tobacco. Through him I learned of the various ingredients that went into its manufacture, including licorice, glucose, glycerine, rum, tonka bean, etc.

People who chew this mixture rarely chew it as they do food, but rather roll it around in the mouth to extract the juice. The mouth is neither cleaner nor healthier for having used it, and my observations lead me to believe that the ones who chew tobacco have more decay than average, due perhaps to the licorice and glucose in chewing tobacco.

Regarding gum, I differentiate between candy-coated gum and flavoured gum with little or no sugar. It is my humble opinion that candy-coated gum and candy designed to flavour the breath are responsible for a tremendous amount of unnecessary decay, due to keeping the saliva loaded with just enough sugar to produce an ideal culture medium for the growth of the bacteria that produces lactic acid and decay. On the other hand, if children are given a good stiff gum after meals, not before, the chewing of it will both help clean the teeth and give the supporting structures of the teeth much needed exercise, producing better shaped jaws and healthier tissues.

For many years I have recommended the use of gum after meals and, realizing the opposition from various sources, I have made a hobby of observing the effects. It is my belief that if people would chew unsweetened gum for from five to ten minutes after each meal there would be a marked reduction in decay, with healthier mouths and much stronger supporting structures around the teeth.

Unfortunately, our present food habits do not give us a sufficient amount of jaw exercise to build strong tissues, so we must find a means of providing that additional exercise. Good gum seems to provide a pleasant means of doing this. It is well known that if a person's vocation does not supply them with the required amount of exercise, they should indulge in some outside activity that will supply them with this need, to develop a healthy body. Sports are one means of doing this. Chewing is as necessary for the facial muscles, teeth, bones and supporting tissues, as sports and recreations are to the office person.

However, there is a time and place for all things. Cleaning our teeth, using dental floss or tooth picks should be confined to the privacy of a bathroom. In a like manner, chewing gum should be confined to a time and place where we do not disturb or annoy our families, friends, or the public. The chewing of gum is not the only thing that annoys people; eating peanuts in a theatre or rattling a program at a musical concert can be most annoying, but that does not mean that peanuts are not a good food or that we should do away with the printed program. The indiscriminate use of gum is objectionable, but that again does not mean that it is not good for the teeth.

J. N. Stewart,
Medical Arts Bldg.,
Hamilton, Ont.

ROYAL CANADIAN DENTAL CORPS NEWS

Lt.-Col. L. E. Kent, M.B.E., of Lachine, Que., has been appointed Honorary Lieutenant Colonel of No. 15 Base Company, R.C.D.C. (R.F). Lt.-Col. Kent was born at St. Anne de Bellevue, Que., educated in Westmount and received his D.D.S. from McGill in 1923. He practised in Lachine, Que., and in 1938 joined No. 19 Field Ambulance R.C.A.M.C. as attached Dental Officer. He was one of the original members of No. 4 Dental Company at Montreal in 1939. He was promoted Major in 1941 and Lieutenant Colonel in 1944. He served overseas in the United Kingdom first as dental officer attached to a Canadian Hospital and then as Officer Commanding No. 18 Coy. C.D.C. (R.C.A.F.). Lt.-Col. Kent was awarded the M.B.E. in the New Year's Honours List, 1946.

Twenty dental undergraduates have been appointed to the Canadian Army Active Force in the rank of Second Lieutenant and will complete their final year at University with full pay and allowances of rank plus cost of tuition, books and instruments.

Six of the nine Reserve Force Dental Companies were represented at the Annual Meeting of the Defence Dental Association, Ottawa, Ontario, 23rd-24th September.

Two new dental clinics, one at the Naval Training Centre, HMCS "Cornwallis," Deep Brook, N.S., and the other at the R.C.A.F. Station, Chatham, N.B., have recently been opened.

Major Milton Warren of No. 3 Dental Company (R.F.), attached to the 8th Field Ambulance, Calgary, Alta., took part in the combined operations known as "Eagle" and "North 3."

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Training Scheme for Oral Hygienists In Britain

The following announcement has been made by the Ministry of Health in Great Britain:

TRAINING SCHEME FOR ORAL HYGIENISTS

A scheme for training women as oral hygienists is being organized by the Ministry of Health so that an adequate test can be made or their value in dentistry.

WHAT AN ORAL HYGIENIST DOES

Oral hygienists are women trained to perform the dental operation of scaling and polishing the teeth and generally cleaning the patient's mouth before the dentist begins treatment. They also advise the patient how to keep his mouth in a healthy condition; this is particularly important for children. The hygienist works under the responsible direction of the dentist.

WHY THE COURSES ARE BEING HELD

So far there are only a handful of oral hygienists in this country, all of whom were originally trained by the Dental Branch of the Royal Air Force who regarded them as being valuable members of the dental team. Several ex-Royal Air Force hygienists have completed a short refresher course of instruction at the Eastman Dental Clinic and are now working in hospitals or in local authority clinics. Hygienists have also proved their worth in the United States of America where they have been working for the last forty years.

It is thought that oral hygienists can do a great deal to improve dental health and in order to extend this work courses of training, which will last nearly a year are being arranged.

This job opens a NEW FIELD of employment for women, one that requires deftness of touch, operative skill and tact in dealing with patients. Oral hygiene promises to be an important factor in preventing dental disease, as many people suffer from subnormal health as a result of an unhealthy mouth.

PAY AND PROSPECTS

A national rate of remuneration has still to be worked out. Meantime hygienists may look forward to receiving about £6 or £7 a week non-resident, according to the location of the hospital or clinic where they work.

All hygienists who are successful in obtaining the Ministry of Health Certificate of Proficiency at the end of the course will be offered posts either in the hospital service or in the public dental service. Employment in a dentist's private practice will *not* be open to them. The job is expected to prove its own

usefulness and to be a permanent part of the health service but no guarantee of *permanent* employment can be given until the value of oral hygienists has been tested and found satisfactory.

DETAILS OF THE COURSE

The *first course* will begin in October 1949 at the Eastman Dental Clinic, Grays Inn Road, London, W.C.1., and it is hoped that two similar courses will be started in the provinces next year.

It will consist of 3 terms of 14 weeks with a week's gap in between.

Uniform (coats and caps) will be provided.

Tuition will be free.

Trainees will find their own lodging but will get a *maintenance grant* of £4 a week during training. There will be opportunity for a good mid-day meal at reasonable cost at the hospital canteen.

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F.D.I.—50th Anniversary—Paris 1950

The Federation Dentaire Internationale has announced that the Executive Council will hold its annual session next year at the end of July in Paris, France, at the invitation of the French National Committee. In the year 1900 the F.D.I. was organized in Paris and it is most fitting that the 50th Anniversary should be held at the same place. Special arrangements are being made to celebrate the event. It has been decided to hold the annual Paris Dental Week at the same time.

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President's Western Itinerary 1949

Arrangements have now been completed for President Fisk to visit a number of dental societies in Western Canada. He will address meetings as follows:

Saturday, November 5, Manitoba Dental Association at Winnipeg.

Monday, November 7, Regina Dental Society at Regina.

Wednesday, November 9, Lethbridge Dental Society at Lethbridge.

Thursday, November 10, Calgary Dental Society at Calgary.

Saturday, November 12, Victoria Dental Society at Victoria.

Monday, November 14, Vancouver Dental Society at Vancouver.

Thursday, November 17, Edmonton Dental Society at Edmonton.

Saturday, November 19, Saskatoon Dental Society at Saskatoon.

The actual time and location of meeting will be announced by the local societies concerned.

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Defence Medical and Dental Board

As of August 24, 1949, Order in Council P.C. 4291 was authorized. The Order reads as follows:

His Excellency the Governor General in Council, on the recommendation of the Minister of National Defence, is pleased to order and doth hereby order as follows:

1. There is hereby constituted a Board to be known as the Defense Medical and *Dental* Services Advisory Board (hereinafter called the Board).

2. The duties and functions of the Board shall be to advise the Minister of National Defence on all matters connected with planning for the defence of Canada in the event of an emergency and pertaining to the provision and assignment of medical, dental, nursing and hospital personnel, hospital facilities and supplies, and to perform such duties in connection therewith as the said Ministry may from time to time direct.

3. The Board shall consist of:
   - (a) The Medical Director General, Royal Canadian Navy
   - (b) The Director General of Medical Services, Canadian Army
   - (c) The Director of Health Services, Royal Canadian Air Force
   - (d) The Director General of Dental Services
   - (e) The Director General of Treatment Services, Department of Veterans' Affairs
   - (f) The Co-ordinator of Civil Defence
   - (g) A representative of each of the following:
     - (i) The Canadian Hospital Council
     - (ii) The Canadian Dental Association
     - (iii) The Canadian Nurses' Association
     - (iv) The Canadian Public Health Association.
     - (v) Department of National Health and Welfare
     - (vi) Department of Labour
     - (vii) The Defence Research Board
     - (viii) The Defence Medical Association of Canada
     - (ix) The Defence Dental Association of Canada; and

(h) Three representatives of the Canadian Medical Association nominated by that Association.

4. The Minister of National Defence shall appoint from the members of the Board a chairman who shall summon and preside at meetings of the Board and have the general direction of its work.

5. The Board, with the approval of the Minister of National Defence, may:

(a) appoint committees for the purpose of assisting the Board in the performance of its duties and functions;

(b) set up an executive committee to deal with business of the Board between meetings;

(c) make by-laws and rules for the regulation of its proceedings and for the performance of its duties and functions.

6. The expenses of the Board, including a permanent secretariat and the necessary travelling expenses of its members, shall be met out of the appropriations for the Department of National Defence.

7. The Board may have an executive secretary who shall be designated by the Minister of National Defence on the recommendation of the Board. Other employees engaged in the work of the Board may be persons in the Civil Service of Canada in the Department of National Defence or other department.

NEWS FROM THE PROVINCES

ALBERTA

Golf at Edmonton

The last and a very successful golf meet of the Edmonton Dental Society took place on September 15 at the Mayfair Golf and Country Club in Edmonton. Thirty-three members turned out for this tournament. The reason for the smaller number was that the rest of the members were busy either polishing their guns getting ready for the duck shooting season which starts on the morning of the 17th or were already on their way to their favourite hunting grounds.

The following is the result of the tourney:

Low score—1st nine—Dr. Bradshaw Stettler.

Low score—2nd nine—C. Dawe of Ash Temple Co.

Low score—18 holes—Dr. R. S. Decker.

Winner of Golf Ball for Birdie—Dr. M. A. McIntyre.

Winners of Golf Balls on Lucky Draws: Dr. R. McCormick, Dr. V. Lloyd, Dr. C. Eastwood, Dr. Lee Dodds.

At the dinner following the tournament, the speaker of the evening was Mr. D. Homersham of Radio Station C.J.C.A. who gave a very interesting talk on the Yellow Head route. After listening to the speaker no doubt was left in the minds of any present that it was by far the best route to take for a Trans-Canada Highway through the Mountains to the Pacific Coast. The speaker was thanked by Dr. Hollis Brown and all the members present expressed their enthusiasm in a very rousing manner.

W. E. A.

SASKATCHEWAN

Death of Valued Members

The profession mourns the loss of two of its valued members in the persons of Dr. D. J. Brass and Dr. W. E. Hainer. Please note details in In Memoriam Section.

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College of Dental Surgeons

The result of the recent elections for the three members to the council of the college was as follows:

Dr. W. M. Blair—Regina.

Dr. M. J. MacDougall—Saskatoon.

Dr. L. F. Hare—Moose Jaw.

Each was elected for a period of two years. The other members of the Council are Dr. Hancock of Ft. Qu'Appelle and Dr. Whyte of Swift Current.

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Saskatoon Dental Society

At the inaugural meeting of this Society for the term of 1949-50 the following officers were installed and plans for the season were discussed.

President—Dr. R. E. Dickson.

Vice-President—Dr. S. R. Gelmon.

Sec.-Treas.—Dr. F. Bernbaum.

Dr. A. Singer, the retiring Treasurer for the Western Canada Dental Society submitted an

abbreviated report upon the financial status of the Society. It indicated that the W.C.D.S. is in good financial condition and that the late Conference in Saskatoon was a success. Expression of appreciation of his efforts as Treasurer were unanimously extended by the entire local membership.

Dr. MacDonell presented a brief report on the activities of the Council of the College. Dr. MacDonell is president of that body.

The question of clinicians for the season was discussed at some length and some plans were finalized. Clinical Dentistry was discussed in which nearly every member participated.

Notice was given that The Provincial College would hold its next Annual meeting in Saskatoon at the end of October, and also at that time the Board of Examiners would be meeting. The Saskatoon Society plan on a special meeting to entertain the two mentioned bodies.

MANITOBA

Winnipeg Dental Society

This Society began its program for the current season on September 6th with a four-day course on Children's Dentistry given by Dr. S. A. MacGregor of Toronto. Forty-six dentists from Winnipeg and rural Manitoba attended in the limited groups and others had indicated their desire to attend if accommodation could be secured. Dr. MacGregor gave a stimulating course of instruction to general practitioners urging that provision be made in every office to include children. He especially asked that the practice of pediodontics be conducted on sound economic lines so that there would be no implication of service without adequate reward. Sandy gave his own method of conducting and managing children which has proven so successful in his capable hands. The interest shown by those attending the course was a clear indication of the value which was received by the men who were fortunate enough to be present.

GORDON CAMPBELL

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A Story from Winnipeg

A little girl who had been attending kindergarten hunted up a small paper bag and went to her mother and asked her for her teeth. "You certainly can't have my teeth" replied the mother. "What do you want them for?" "Well" said the child "teacher in school showed us how to brush our teeth and told us that if she had a set of teeth she would show up much better so I want to take your teeth to the teacher."

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Golf

The golfing enthusiasts of the Winnipeg Dental Society concluded their seasons play at the Elmhurst Country Club Sept. 20. The game was enjoyed by many as was the "nineteenth hole" where dinner and entertainment was left in Alex's capable hands.

The good golfers were:

Championship cup (low gross)	Mr. Ken Coutts
Class A cup	Dr. Jack Abra
Class B cup	Dr. Sam Churchill
Class C cup	Dr. Ab. Johnson

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Winnipeg Dental Nurses and Assistants

This Association held its first meeting of the season Sept. 12 at Moore's. Report of the Western Canada Convention held in Saskatoon in June were as follows:

The Trip and Social Activities—Mary McArthur

The Western Canada Business Meeting—Margaret Kitching

The Canadian Business Meeting—Hazel Foster

Speakers and Clinics—Kay Hoffard.

F. JEFFREY

ONTARIO

University Dental Alumni

The executive of this branch of the University Alumni federation are already very busy with their plans for a dinner and ladies night at the Royal York Hotel on February 20.

At last year's meeting 97 were present and this year's objective is 400. There are 735 members of the dental group now, an increase of 67% over 1948. The membership objective for 1950 is 1,000.

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Annual Winter Clinic, Toronto Academy of Dentistry, Thursday, November 24, Royal York Hotel

It is the custom of this Society to present an interesting educational program and this year is no exception. Thought provoking discussions will be presented by the following speakers:

Dr. R. M. Appleman, Chicago, Illinois. Subject—"The Extended Tube Technique in Intra-Oral Radiography."

Dr. Frank C. Hughes, Indianapolis, Indiana. Subject — "Precision Methods in Complete Denture Service."

Dr. M. Armacost Cox (Chairman), Dr. J. Harry Ebbs, Dr. William A. Hawke, Dr. Byron Hughes, Dr. S. A. MacGregor. Symposium—"Habits in Relation to Mouth Health."

Lieutenant Colonel K. M. Baird, O.B.E., Colonel G. B. Shillington, Major B. P. Kearney, M.B.E., all of the Royal Canadian Dental Corps. Symposium—"Treatment Planning."

Commander W. C. Wohlforth Jr., Bethesda, Maryland. Subject—"Acrylic Resins in Crown and Bridge Procedure."

Dr. F. T. Pearson, Toronto, Ontario. Subject—"Helpful Suggestions in Operative Dentistry."

Dr. Robert E. Moyer, Iowa City, Iowa. Subject—"Phases of Orthodontics of Interest to Dentists in General Practice."

Dr. G. W. Johnston, Toronto, Ontario. Subject—"Amalgam Restorations."

Dr. David H. MacDonald, Toronto, Ontario. Subject—"Dental Oral Surgery for the General Practitioner."

Dr. R. A. Clappison, Toronto, Ontario. Subject—"Hydrocolloids in Operative Dentistry."

Dr. W. G. McIntosh, Toronto, Ontario. Subject — "Relationship of the General Health Status to the Dental Tissues and to Dental Therapy."

Dr. A. W. S. Wood, Toronto, Ontario. Subject — "Everyday Problems in Dentistry for Children."

Dr. T. R. Marshall, Toronto, Ontario. Subject—"The Dentist and His Practice."

This is really a one day Convention with a very full program. Out of town dentists will be made very welcome.

Earl Bancroft, D.D.S., Convener.

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Toronto and District Golf Meet

The fall tournament of this annual event was played on the beautiful St. George's Golf course on September 16. There were about 50 dentists and their friends in competition and from the prize list nearly every player won a prize.

Low gross and winner of the Dr. Alex Elliott tray was Dr. Lou Harris who was best golfer of the day. Low net and winner of the Gordon McLean Cup was Dr. Leon Hipwell. Other prize winners were—Dr. R. Bennett, Dr. R. Hoffman, Dr. C. R. Castaldi, Dr. F. Bajurny, Dr. J. E. Hackett, Dr. R. W. Marshall, Dr. J. Evans, Dr. R. Broadworth, Dr. W. Dewar, Dr. E. R. Boyle, Dr. F. Loucks, Dr. J. A. Greenfield, Dr. C. O. Lennox, Dr. H. E. Barker, Dr. D. MacDonald, Dr. H. Halderson, Dr. W. McIntosh, Dr. H. Armstrong, Dr. F. Dean, Dr. J. Dales, Dr. W. Voaden, Dr. O. L. Weaver, Dr. T. R. Marshall, Dr. D. Dempster, Dr. H. W. Pascoe, Dr. D. Fraser.

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Royal College of Dental Surgeons Board Meeting

The President has called a meeting of the Board of Directors to be held in the Board Room, 211 Huron Street, Toronto, beginning at 9 a.m. on Monday, December 5, 1949.

General business will be considered at this meeting.

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Eastern Ontario Dental Convention

This Association held its Seventy-Second Annual Meeting at the Chateau Laurier hotel in Ottawa on Sunday, Monday and Tuesday, September 11, 12 and 13.

Sunday morning the annual golf tournament got under way and prizes were won by Dr. Lorne Barnabe who had the 1st low gross and Drs. Mike Mulvihill and A. W. Chambers, 2nd and 3rd respectively. Dr. Dewey McKerracher had the 1st low net with Drs. George Barrett and Mike Derrick, 2nd and 3rd.

In the evening members of the E.O.D.A. and their guests crowded the Convention Hall of the Chateau for a Musicale which was tops both as art and as entertainment. This yearly event is becoming very popular with the Association members and offers the profession an opportunity to entertain their friends. It is a splendid effort in extending good public relations.

The regular session opened Monday morning under the chairmanship of E.O.D.A. President Dr. Aimé Coûture, who conducted all affairs in a capable and genial manner and he is to be congratulated on his efforts to make the convention a success.

During the meeting papers were given by Dr. Warren Rand Schram, Northwestern University, Chicago, on oral surgery (two papers); Dr. F. H. Coté, Ottawa, on "Recent advances in surgery"; Dr. P. Geoffrion,

Montreal, on "Orthodontia for the general practitioner"; Dr. H. H. Pearson, Montreal, on "Endodontia and bleaching"; and Dr. Lee Honey, Welland on his work in the Welland & District Health Unit. There were also two films shown on the manufacture of artificial teeth. All these fine contributions were certainly of a high order and were well received.

On Monday noon a joint luncheon with the Ottawa Dentists' Wives' Association featured Mr. Derek G. Currie of the E. B. Eddy Co., as a very pleasing guest speaker. In the afternoon the table clinics were presented and added a great deal to the meeting as they always do at a convention of this sort.

The dinner dance on Monday evening was a high spot on the program and gave everyone the chance of a real good time with old and new friends.

At the business meeting on Tuesday afternoon the following officers were elected:

President: Dr. Irving Calder, Brockville.

Vice President: Dr. Paul Coté, Ottawa.

Sec. Treas.: Dr. Elwin Macartney, Ottawa.

Advisory Board: Drs. Aimé Coûture, Past President; H. A. Stewart, M.L.A.; A. A. Antoni; H. N. Beach; Jim Mandeville; Walter Flora; E. Johns; W. H. Pritchard; Fred Kemp; Lorne MacLachlan; C. E. Woods; Jack Lawrence.

Auditors: Drs. W. C. Macartney and S. W. Bradley.

On Tuesday evening the convention wound up with some sprightly entertainment by Messrs. Gay, Coûture, Hannaford and Co., which was presented in the best of spirits. This was followed by a very fine address by Mr. Raoul Mercier, K.C., Crown Attorney, Ottawa, in which he set forth for us the goal of a Canada not Catholic and French, nor English and Protestant but Canadian and Christian. A high standard indeed and deserving of our allegiance.

We hope our friends will return again and again to Ottawa, to participate in this meeting.

HAROLD BEACH

NEW BRUNSWICK

Maritime Dental Meeting at Saint Andrews by the Sea

The picturesque and quaint town of Saint Andrews by the sea was the location chosen for the first Maritime dental meeting in a great many years on August 31, Sept. 1 and 2. This convention was sponsored by the New Brunswick Dental Society and received good support from the Nova Scotia and Prince Edward Island Societies. There were approximately two hundred registered. The Algonquin Hotel was the center of most of the convention activities. This hotel is well situated overlooking the town and has a Casino at which all the clinics and the exhibits were held. The general chairman and master of ceremonies was Dr. A. J. Coughlan of Saint John to whom great credit is due for the success of the convention. Committee Chairmen were as follows:

General Chairman—Dr. A. J. Coughlan, Saint John, N.B.
Treasurer—Dr. E. R. McClintock, Centerville, N.B.
Clinicians—Dr. J. F. Edgecombe, Saint John, N.B.
Programs—Exhibits—Dr. J. B. O'Brien, Saint John, N.B.
Table Clinicians—Dr. F. L. Miller, Fredericton, N.B.
Registration—Dr. T. H. Lewis, Woodstock, N.B.
Hotels—Dr. Howard MacDonald, Saint John, N.B.
Property—Dr. Hugh Bonnell, Saint John, N.B.
Transportation—Dr. G. K. Williamson, Saint Stephen, N.B.
Publicity—Dr. S. K. Cougle, Saint John, N.B.
Entertainment—Dr. F. S. Simms, Saint John, N.B.

Ladies' Committees:

General Conveners—Mrs. Lea Allanach
Mrs. Ross Harrington
Registration—Mrs. Selby Wetmore
Transportation—Mrs. George McDougall
Social—Mrs. A. J. Coughlan
Mrs. J. F. Edgecombe
Golf—Mrs. J. R. Hutchison
Press—Mrs. J. B. O'Brien

Registration took place on Tuesday evening and Wednesday morning. One outstanding incident is worth noting. Dr. A. J. Cormier of Moncton was registered with his three sons all four being practising dentists in N.B. The exhibits had a floor to themselves in the Casino. The cancer exhibits and the Public Health exhibits were in the lecture hall and were very well received. Table clinics were given the opening morning at eleven o'clock and were well attended. Those participating were as follows:

Loy I. Duffy, Charlottetown, P.E.I.—"Rubber Dam"
J. P. Coupland, Ottawa, Ont.—"Reduction of Radiographs"
W. J. McLeod, Truro, N. S. — "Staining Acrylic Teeth"
John Merritt, Halifax, N.S.—"Jacket Crowns"
Robert Ogilvie, Fredericton, N.B.—"Gingival Gold Foil Restoration"
Reginald Winn, Montreal, P.Q. — "Orthodontia"
R. E. Lussier, Montreal, P.Q.—"Hints and Shortcuts of Practical and Timesaving Value to the General Practitioner"

The guest speaker at the first luncheon was Dr. Vernon Fisk of Toronto, president of the Canadian Dental Association. He outlined the progress and some of the future plans that the C.D.A. had projected. At the afternoon session Dr. George E. Hall and Dr. Alex Keltie both of Boston, Mass. gave a clinic on the "Davis Technique of Synthetic Fillings". This proved so popular that it had to be repeated several times. It was stated that this was the fifty-sixth meeting at which this clinic had been presented. The ladies on Wednesday were entertained with one group going to Calais in Maine and the other to afternoon tea on the swimming beach at Katey's Cove. In the evening a recent release movie in technicolour was enjoyed by many guests at the Casino.

On Thursday Miss Marion Belding, secretary of the N.B. Cancer Society gave an interesting talk on that Society's progress. It was announced by a telegram from the deputy minister of health for N.B. that in future a dentist may send a patient direct to any of the nine diagnostic centers in the province and not of necessity call in the family doctor as was the case previously. Dr. Roy Ellis, Dean of the Faculty of Dentistry at the University of Toronto, read an essay on "The Child in Your Practice Today—Tomorrow." Dean Ellis has a broad knowledge of what is transpiring in children's dentistry not only in Canada but in other countries. He stressed that not only incipient caries and malocclusion may be found in children but also incipient periodontoclasia which most dentists if they did recognize it did little if anything about it. Dr. Irving R. Hardy, Professor of Prosthetics at Tufts Dental College gave a very lucid and well illustrated talk on "Partial Dentures". His years of experience in private practice and his thorough knowledge of basic principles which he could teach so convincingly made this lecture a very popular one.

Luncheon guests were the various heads of services with Dr. Stanley Bagnell, Dean of Dalhousie Dental College, acting as chairman. At this luncheon an engraved silver tray was presented from the N.B. Dental Society by Dr. Fenwick Bonnell to Dr. E. R. Hartt of Sackville for completing fifty years of practice. At the afternoon session Dr. Stephen D. Mallett, Oral Surgeon in Chief, Boston City Hospital, gave a very interesting lecture on "Exodontia and Minor Oral Surgery Problems." A late afternoon party was enjoyed in the main lounge of the Algonquin Hotel which was well attended including his honor the Lt. Governor and Mrs. McLaren, Mayor and Mrs. Hachey of Saint Andrews and other guests. At dinner the president of the N.B. Dental Society, Dr. Lea Allanach acted as chairman. Lt. Governor McLaren in his inimitable manner welcomed the guests to N.B. He gave some amusing extracts of dental advertisements taken from old newspapers and punctuated his remarks with some appropriate stories. The guest speaker of the evening was Dr. Harry Thompson, a former secretary of the Canadian Dental Hygiene Council, also former practitioner of Moncton, N.B. Dr. Thomson spoke eloquently on this progressive era of dentistry and his forecast for the future of dentistry was very bright. A well attended dance was held in the evening at the Casino. An attractive red leather travelling bag was won by Mrs. Oliver of Montreal.

Friday the last day of the convention was opened by remarks from Dr. Lea Kilburn, director of the dental department of Veterans Affairs. He was followed by Dr. Mallett from Boston on "Oral Surgery". This lecture was illustrated with lantern slides. At luncheon Dr. Al Coughlan acted as chairman and his assistants, the various chairmen of all committees, were guests at the head table. The guest speaker was Dr. Brown, director of the dental department of Health and Welfare at Ottawa. Both the N.B. and N.S. branches of the Defence Dental Association held private luncheon meetings. At the afternoon session Dr. Irving Hardy gave an illustrated lecture on "Immediate Dentures". His lecture was followed by a question period. After his lecture the N.B. Dental Society held its annual meeting. This meeting was adjourned for a

time and place to be named by the executive. It was decided at a meeting of the Nova Scotia members while at the Convention to have a Maritime meeting next year at the Pines — a C.P.R. Hotel in Digby, N.S. It would appear after the success of this year's meeting that the Maritime Convention is here to stay as an annual event— a combination holiday and convention. J. F. EDGECOMBE

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A Story from New Brunswick

A group had assembled at the railroad station to bid farwell to several dentists leaving for a dental convention. It was during the tourist season and pullman accommodation was at a premium. One of the ladies saying goodbye and just to make conversation asked a dentist "Have you an upper?" The prompt dentally conscious reply was startling—"Yes a full upper and a partial lower."

NOVA SCOTIA

Tribute to Dr. Victor Crowe

Victor Crowe will be genuinely missed by his fellow dentists in this province. A son of Nova Scotia, a graduate of the Dalhousie Dental School, active as a practitioner in his own community, taking his share in fostering the organized activities of his profession he made his contribution as a professional man and as a citizen. For his energy was by no means exhausted by his manifold vocational interests: he espoused his many avocations with the same zest and enthusiasm. Whether in the field of sports, in the work of his church, in his fraternal interests or in the realm of public health; whatever he did he did with all his might; his participation was never half-hearted.

Readers of this Journal do not need to be reminded of Victor Crowe's contribution to Canadian dentistry, culminating in his presidency of our national Association in 1946. He had already served as president of his provincial association. It is appropriate that a provincial communication should record that while we in this province are proud of the contribution that he made to organized Canadian dentistry, at the same time the name of Victor Crowe will always bring to our minds a picture of a very vital person abounding in genial human interests whose friendly contacts contributed to the atmosphere of understanding cooperation that has usually pervaded the meetings of our profession in Nova Scotia.

W. W. WOODBURY

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Nova Scotia Dental Association

The Fifty-ninth annual meeting of the Nova Scotia Dental Association was held at Dalhousie University in Halifax, July 19-22.

In view of the Maritime Convention to be held later at St. Andrews, New Brunswick, this meeting was confined to purely business sessions, and a course in Children's Dentistry by the well known Dr. S. A. MacGregor of Toronto, with a good attendance.

The business meetings were presided over by the President Dr. Ross Harrington.

Following is a list of officers elected for the ensuing year.

Members Provincial Dental Board:
- Dr. J. H. H. Rice—Halifax.
- Dr. H. M. Eaton—Halifax.
- Dr. M. E. Morrison—Antigonish.
- Dr. L. G. Israel—Sydney.
- Dr. G. M. Dewis — Sec'y-Registrar, Halifax.
- Dr. W. R. Fraser—New Glasgow.
- Dr. N. M. Layton—Truro.
- Dr. J. A. Tupper—Lunenburg.

President ..... Dr. Gordon B. Richmond, Sydney.

Vice-President ..... Dr. James P. McQuigan, Halifax.

Junior Vice-President..Dr. J. Aubrey Tupper, Lunenburg.

Secretary ..... Dr. A. Borden Haverstock, Halifax.

Executive member ..... Dr. A. Willard Taylor, Yarmouth.

Auditors (N.S.D.A.)
- Dr. G. A. Chudleigh ..... Halifax
- Dr. R. F. Cameron ..... Dartmouth

Dental Public Health Committee:
- Dr. G. M. Logan—Halifax
- Dr. G. C. MacLeod—New Waterford
- Dr. L. B. Layton—Annapolis Royal
- Dr. P. S. Christie—Halifax
- Dr. J. W. Dobson—Halifax
- Dr. G. M. Dewis—Halifax
- Dr. R. R. Dalgleish—Sydney
- Dr. A. B. Anthony—Yarmouth
- Dr. A. H. Wilson—New Glasgow

RESOLUTION

A resolution was adopted, raising the annual fee to thirty dollars per member, twenty of

which is to go to the Canadian Dental Association.

Our meeting was saddened by the sudden death a day previously of the much beloved Dr. Victor Crowe our Canadian Dental Association Representative and recent President of that body. Dr. Woodbury expressed the deep feeling of the loss sustained by all of us at his passing. W.C.O.

BRITISH COLUMBIA

Fraser Valley Dental Society

The first fall meeting of this Society was held at Abbotsford, in the heart of the Valley. The clinician for the evening was Doctor Lloyd Jacobson, of New Westminster, presenting his subject of "Fine Amalgams." This district covers an area of over a thousand square miles. Meetings are held at various centres throughout the district each month, and some of the members are sometimes called upon to travel as far as fifty miles to attend the meetings.

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Interior Dental Society

This Society, comprising the entire Okanagan Valley district, planned its annual fall meeting to be held at Vernon this year. Several members of the Society present clinics, and one or more clinicians are brought in from the larger centres for the occasion. This year, an invitation was sent to Doctor Alec Gunning, of Victoria, to give a clinic on "Gold Inlays."

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B.C. Dental Association

Various committees of this Association have been at work for some time, following the summer recess. Recently, the subject of co-ordination of the administrative work of three organizations—the College of Dental Surgeons of British Columbia; the Vancouver and District Dental Society, and the British Columbia Dental Association, has again been brought to the fore, and a committee has been appointed to carry on the investigation. It is hoped that a joint headquarters office for the three organizations may be established, and that the combined secretarial duties may be more efficiently and economically performed. Some thought has also been given to the establishment of a dental library, under the auspices of the three groups.

•

Kootenay Dental Society

This Society, with headquarters at Nelson, has requested a clinician on the subject of "Prosthesis". Doctor Hallman, of Vancouver, was asked by the committee of the British Columbia Dental Association to attend this meeting and present a clinic. Doctor Hallman has been associated with a Seattle study club for the past considerable time, on subjects associated with dental prosthesis.

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Vancouver and District Dental Society

Doctor Herman Becks, Professor of Dental Medicine of the University of California School of Dentistry, was the guest speaker for the October meeting of this Society. As on many occasions in the past, both afternoon and evening meetings were arranged. The subject for the afternoon meeting was "Problems of Oral Diagnosis" and for the dinner meeting, "Diet in Relation to Caries Control." Doctor Becks, as a writer and teacher, is one of the most outstanding figures in the dental world of today. He has lectured to Vancouver dentists previously, and is well known through his excellent presentations before the Pacific North-West Conferences in Dental Medicine.

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Preventive Dentistry

Doctor Frank McCombie, Assistant Director of Preventive Dentistry for the Province, has left for Toronto to spend the next eight months in continuation of his studies on the subject of Dental Public Health. His position will be filled temporarily during his absence.

EMPIRE NEWS

GREAT BRITAIN

Large Incomes?

A Scottish dentist acknowledged today that he took in £25,000 ($100,000) during the first 11 months of Britain's socialized health scheme. But when he finished paying taxes and other expenses, he said he actually wound up in the red. The tax on an annual income of £25,000 would be £20,500 ($82,000).

The dentist said before the government started paying the bill for Britons' dental work

he had two helpers and netted about £2,400 ($9,600) a year.

When the health scheme came into being he built a surgery which cost him £1,500, engaged four more helpers, and made one of his assistants a full partner in the business. "We worked seven days a week, and late at night," the dentist said. "My receipts were tremendous—but so was the expenditure. After I had paid income tax I have no surplus to meet the cost of the surgery building."—Ann Arbor News 115:12 July 15, 1949.

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Dental Service Committees

It is becoming increasingly obvious that the disciplinary machinery and in particular the procedure laid down for Dental Service Committees, will have to be overhauled in the near future.

When a case is heard against a dentist before a Dental Service Committee the decisions arrived at may have far-reaching effects both on the practitioner concerned and on the profession generally.

Complaints are sometimes made to Executive Councils, and are even aired in Parliament, that patients cannot obtain treatment without a few weeks' delay. On the other hand, the Health Acts Department often receives complaints from dentists of the intolerable delay that takes place in the authorization of some estimates, particularly when the Dental Estimates Board requires an R.D.O. examination. Once, however, a patient gets innocently involved in a case which the Ministry feels requires investigation his plight is indeed desperate. The ponderous machinery must be allowed to wheeze on its weary way without undue haste, and the unfortunate patient merely becomes "Exhibit A" in the case.

In a recent case for over six months an unfortunate patient's dental condition was allowed to deteriorate while officialdom indulged in its favourite game of "passing the buck." The sooner the Ministry and the D.E.B. realize that patients are human beings and not just a series of National Identity Numbers and the sooner they speed up their methods so that patients wishing to have treatment are not subjected by them to these long delays, the better will be the Health Service for the public.—Br. D. Jour., Sept. 2, 1949.

Amalgamation Agreement Signed

A further step toward amalgamation of the British Dental Association, the Incorporated Dental Society and the Public Dental Service Association was taken on Friday, September 2, when representatives of the three dental organizations met at Hill Street to sign the Amalgamation Agreement.

The documents prepared by the solicitors on the lines laid down in the Amalgamation Committee's Report were duly signed and sealed by the nine appointed signatories in the presence of the solicitors of the three Associations and of several members of the Drafting Committee. This much can certainly be said: if the spirit of friendliness and good will shown on this occasion can be accepted as an indication of the future attitude of those concerned, many of the practical difficulties of amalgamation will be overcome more easily than at first seemed likely, and the future of the Association, as representing the whole profession, could hardly have been cast under a more auspicious star.—Br. D. Jour.

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Advertisements For Public Dental Officers

Following upon the decision of the associations of local authorities to participate in a Whitley Council to fix and regulate the salaries of public dental officers on a national basis, the ban on advertisements in the Journal of posts which did not offer salaries on the scale put forward by the British Dental Association, has been lifted, and such advertisements will again be accepted. It is interesting to note that some authorities are already advertising posts at commencing salaries of £1,000 or over, and that others have given their dental officers salary increases of £150 or £200 per annum, these being in most cases ante-dated to the beginning of the year.—Br. D. Jour.

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Immediate Dentures

The following letter (E.C.N. 32) is being circulated by Executive Councils to dentists on their lists.

"The Executive Council understands from the Minister of Health that some dentists seem to be under a misapprehension about the stage (following extractions) at which a denture may be provided to a patient receiving general dental services.

"There is no requirement in the Regulations governing the provision of general dental services (as there was under the old dental benefit scheme) that dentures shall not be fitted until absorption is sufficiently complete for 'permanent' dentures (as distinct from 'immediate' dentures) to be supplied. Subject to the general requirement that all treatment must be proper and necessary treatment, it is open to the dentist to provide dentures as soon as he considers that the patient's mouth is in a satisfactory condition to receive them.

"No matter at what period after extraction dentures are provided during the currency of the dental estimate form, it should be clearly understood that no fee is chargeable to the patient for their provision.

"Initial loss of fit due to absorption may occur in some cases and can usually be made good by relining. If in the course of time the degree of absorption is such that function cannot be maintained by relining a new denture will become necessary. The relining or (more rarely) the replacement can also be provided under the general dental services, subject to the approval of the Dental Estimates Board in the usual way."

This letter makes it clear that even if a dentist does not think the immediate insertion of dentures is clinically necessary he is entitled, if the patient desires "immediate" dentures, to provide them under the Service, provided that he is of the opinion that the mouth is in a proper state to receive them.—Br. D. Jour.

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The School Service

How serious is the staffing position in the School Dental Service is strikingly demonstrated in a table in the Midland Division Circular published by the Midland Division of the Public Dental Officers' Group. The table contains particulars relating to twenty-one authorities in the Midlands. These have an authorized establishment of 212 dental officers, with a ratio of approximately 4,000 children to each officer. The actual number of dental officers at present employed is only 98.5 which is equivalent to one officer for each 9,000 children. A surprising feature of the table is that in a progressive city like Birmingham the full establishment of dental officers is in the ratio of 1 dental officer to 11,822 school children.—Br. D. Jour., Aug. 19, 1949.

NEW ZEALAND

Adolescent Dental Service

While the present temporary fee-for-service scheme for adolescents came into force early in 1947, it should be clearly understood that the regulations under which it is administered allow for the parallel growth of a salaried service in addition. Under present circumstances this salaried service has proved difficult to build up, and it is possible that these difficulties will prove insuperable for a very long period. However, some slight progress has been made, though the Government has not been fully successful in attracting personnel, either for professional or administrative duties.

At the Annual Conference held in Wellington in 1948, the Executive Council confirmed the general policy of the Association's attitude towards a temporary fee-for-service, but an ultimate salaried service, for adolescents in New Zealand.—New Zealand D. Jour., July, 1949.

GENERAL NEWS

Farewell To A Pioneer

Fourteen years ago the German dye and chemical trust announced the discovery of a red dye that was near-magic against a wide range of streptococcus infections. A few months later French scientists found that all the "magic" in the dye was contained in one of its constituents, a colourless substance known since 1908 but unused in medicine. It was sulphanilamide, first of the "sulpha" drugs, pioneer of the epoch of modern chemotherapy. Improved derivatives of sulphanilamide were rapidly developed, and then came penicillin, streptomycin, aureomycin and all their kin.

Recently the A.M.A. Council on Pharmacy and Chemistry held its annual meeting and decided to drop the pioneer, sulphanilamide, from New and Nonofficial Remedies, the annual volume listing current preparations accepted by the Council. Apparently, it reported, very little sulphanilamide is now used in the treatment of human disease in this country.

Hygeia, April, 1949
per D. Items of Interest

Freedom From Want

Freedom from want was one of the results which President Roosevelt hoped that peace would bring. Most educated people, however, are now aware that unless the production of food is increased at a faster rate than that of the world's population, attempts at social improvement are not likely to succeed. The elements of the problem are simple: world population is increasing at the rate of at least 20,000,000 people a year, an average of two every three seconds. The two may well become three or more as science advances, social services improve, and bodies such as the World Health Organization become fully operative. Although some areas are relatively empty, others are already over-populated and it is just in these areas, such as the West Indies, that the population increase is of the order of 2% per annum. If world food supplies are not progressively increased, if the growth of population is not slowed down by control of births, or if mass migration does not take place, then one or more of Nature's checks will be automatically applied in the form of famine, war, or epidemic disease. If freedom from want is to be attained, much more than the application of the natural sciences to food production will be required: superstitions, religious scruples, racial customs and prejudices—based often on the unconscious and irrational—are as important as, perhaps more important than, economics and politics.—Br. Med. Jour., Sep. 10, 1949.

IN MEMORIAM

D. J. Brass of Yorkton, Saskatchewan, died suddenly in Edmonton in September.

In his death the dental profession in Saskatchewan has sustained a distinct loss. He came to Saskatchewan immediately upon graduating from Northwestern University in Chicago. Upon registering in this province he located in Hanley. In 1913 he moved to Yorkton where he practised until his death. Just early this summer he disposed of his practice and was about to retire, when he died suddenly in the University Hospital in Edmonton while visiting his son.

Dr. Brass was a member of the Council of the Dental College of this province from 1934 to 1948 and while on that organization gave very valuable service. He was chosen by the Council to be their representative on the Senate of the University of Saskatchewan some years ago, a position which he very ably filled until the time of his death. He was a writer and a speaker of considerable ability and for these reasons on many occasions was asked by the Council to present briefs to the Provincial Government.

Besides his contributions to the profession he was very interested in education and served as Chairman of the Collegiate Board in Yorkton for twenty-three years. He was also a member of the Hospital Board of that city; was interested in the Red Cross Society and many other organizations. He will be greatly missed by the citizens of Yorkton.

His great interest and sympathy for mankind was displayed during the war when he worked longer hours at dentistry and in community work than his strength permitted so that no one would suffer and this may have been a contributing factor in shortening his life.

Dr. Brass is survived by his widow, a son, Dr. G. A. Brass, Edmonton, and a daughter, Peggy, of Vancouver.

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William Thomas Griffin of Hamilton, Ontario, died on September 11.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1895. He practised dentistry in Hamilton for 42 years retiring in 1937. In 1941 he was presented with an honourary life membership in the Hamilton Dental Association for his meritorious service to the Association and the profession.

Dr. Griffin was a member of St. Mary's Roman Catholic Church in Hamilton.

He is survived by one brother and one sister.

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W. E. Hainer of Shaunavon, Saskatchewan, died in September. He was graduated from the Royal College of Dental Surgeons of Ontario in 1926. For the past twenty-three years he had practised in Shaunavon. He was a valued member of the United Church and of the Masonic Order. Great is the loss to the community and profession in his passing.

Dr. Hainer is survived by his widow and three children.

IN MEMORIAM

William Aylmer Fergie of Cranbrook, B.C., aged 56, died September 9. He was graduated from the Portland Dental School and commenced practice in Cranbrook in 1919.

He was a member of Cranbrook Lodge No. 34 A.F. and A.M. He was a charter member of Cranbrook Gyro Club, and was also among the districts' most prominent sportsmen.

Dr. Fergie is survived by his widow and two sons, William of Calgary and Dr. Frank Fergie of Cranbrook, also one daughter and two grandchildren.

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Adlington Gott of Toronto died suddenly in his office from a heart seizure on October 10.

Dr. Gott was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1921. He immediately began to practise in the Dovercourt-Hallam district in Toronto where he continued until his death.

He is survived by his widow and three sons.

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Howard Roydon Lindsay of Renfrew, Ontario, died suddenly on September 20 at the age of 42.

Dr. Lindsay was graduated from the Faculty of Dentistry, University of Toronto, in 1931 and took up practice in Rochester, New York. In 1936 he moved to Ottawa and then to Copper Cliff. He received an appointment in the Canadian Dental Corps in 1941 where he served until 1946, when he retired and began practice in Renfrew.

He was a member of the United Church of Canada.

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Philip Bradley Proudfoot of Russell, Ontario died on October 1 at the age of 74.

Dr. Proudfoot was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1904. He was a native of Prescott County, receiving his early education in Vankleek Hill. On graduation he took a course at Chicago Dental College before beginning to practise in Russell forty-five years ago. He was alert to professional progress and was very interested in possibilities of fluorine and its uses.

Dr. Proudfoot was active in educational and fraternal work. He served a number of years as school trustee; he was a past President of the Ontario Education Association; he was Honourary President of Eastern Ontario Trustees and Ratepayers Association and a Past President of the Ontario Trustees and Ratepayers Association. He was a Past Master of Russell Lodge A.F. & A.M.; an Oddfellow and a member of the Independent Order of Foresters.

In religion he was a Presbyterian and in politics a Liberal.

He is survived by one daughter and two sons.

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James William Robson of Brantford, Ontario, died on October 11 at the Brantford General Hospital.

He was graduated from the Faculty of Dentistry, University of Toronto in 1928. After graduation he practised in Grimsby, Kirkland Lake, and Toronto. He spent two years on the Empress of Britain. For the past nine months he was Dental Surgeon to the Six Nations Indians' Reserve at Brantford, Ontario.

In College days he served for four years as editor of Varsity. He was active in hockey and was a permanent member of the Advisory Board of the University of Toronto Athletic Association. He was a member of Xi Psi Phi fraternity.

He is survived by his widow, two daughters and his mother.

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John Howard Stitt of Sudbury, Ontario, died after an illness of five months on August 13. His age was 61 years.

Dr. Stitt was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1915. On graduation he began to practise in Sudbury and has continued there until his death. In 1929 he was President of the Sudbury Dental Society.

He was an active member of the Sudbury Curling Club, and the Sudbury Golf Club. He was a past master of the Nickel Lodge A.F. & A.M., serving as Master in 1934. He was also a member of Tuscan Chapter.

He was a member of Knox Presbyterian Church.

Dr. Stitt is survived by his widow, one son William of Indiana and one daughter Elizabeth of Los Angeles.

Le Journal DE L'ASSOCIATION DENTAIRE CANADIENNE

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LA DENTISTERIE INDUSTRIELLE*

par C. ABERDEEN E. McCABE, D.D.S., F.I.C.D., Valleyfield, P.Qué, président du Comité de Dentisterie Industrielle de l'A.D.C.

Notre ère de socialisation ne peut nous laisser indifférents. Tous nous avons été témoins de l'étatisation de l'art dentaire en Angleterre, tous nous avons entendu parler de l'Assurance-Santé Dentaire et de l'Hygiène Dentaire Publique. Ce soir, grâce à l'aimable invitation de votre Président et de l'Exécutif de notre Société je viens vous causer de Dentisterie Industrielle.

Pourquoi consacrons-nous tant de temps à l'étude de la socialisation de l'Art Dentaire? Contrairement à ce que pensent quelques-uns d'entre vous, c'est pour éviter l'étatisation.

En effet, il y a une grande différence entre étatiser et socialiser. Etatiser veut dire contrôler, diriger, administrer par l'Etat, tandis que socialiser, à mon sens, veut dire: mettre l'art dentaire à la portée de tout le peuple canadien, tout en conservant à notre profession son autonomie et, si possible, la non-intervention de l'Etat.

Le programme d'Hygiène Dentaire Publique de l'Association Dentaire Canadienne est déjà un pas dans la bonne direction. Il suffit cependant de se rappeler qu'il ne s'applique qu'aux enfants pour se rendre compte des possibilités de la Dentisterie Industrielle, pour cette partie de la population, qui a dépassé l'âge prévu par le dit programme d'Hygiène Dentaire Publique.

Tout d'abord que faut-il entendre par dentisterie industrielle?

Le conseil d'Hygiène Dentaire de l'Association Dentaire Américaine la définit "cette spécialité de l'art dentaire qui se préoccupe de la santé dentaire du travailleur industriel, en autant qu'elle affecte ou qu'elle est affectée par sa santé générale ou son milieu de travail."

Dès 1887, en Angleterre, cette notion trouvait une application: en effet, le programme de la Great Western Railway ajoutait un service dentaire aux services médicaux et chirurgicaux déjà offerts à ses employés.

Trois ans plus tard, le mouvement se propage à l'Amérique du Nord lorsque la Barber Match Co. organise pour ses employés un programme dentaire.

Les premiers services dentaires industriels de l'Amérique du Sud furent organisés en 1900, à Rio de Janeiro, Brésil, par le Dr Hector Barreto, qui offrit aux 300 employés de la Cia Lug. Stearica S.A.Co. un service, qui exista plus d'un quart de siècle.

En 1918, aux Etats-Unis, l'Association Nationale des Chirurgiens — Dentistes Industriels fut fondée.

*Conférence présentée à la Société Dentaire de Montréal, le 15 mars 1949.

En 1926, le Congrès International Dentaire tenu à Phildelphie révélait qu' au Canada et aux Etats-Unis, 91 industries maintenaient des services dentaires. Devant cet intérêt, manifesté tant par la profession que par l'industrie, le dit congrès, par résolution, stipula que la dentisterie publique est la continuation des services dentaires scolaires et doit être fournie par les caisses de maladies, les hôpitaux, les usines, l'Armée, la Marine et les autres institutions du même genre.

Quant au Canada, il semble que la première expérience de la clinique dentaire industrielle ait été tentée par une compagnie de papier de Grand'Mère, Province de Québec.

Une seule Hygiéniste dentaire assurait un examen gratuit et une prophylaxie, deux fois l'an. Tous les employés devaient y avoir recours. Ceux qui avaient besoin de soins supplémentaires étaient renvoyés à leur propre dentiste, qui exécutait le travail, moyennant des taux fixés après entente avec la Compagnie. Le coût en était défrayé en raison d'un tiers par la Compagnie, d'un tiers par l'Association de Bénéfices et enfin d'un tiers par l'employé.

L'Association de Bénéfices Mutuels se composait des employés qui souscrivaient volontairement, en raison d'une contribution hebdomadaire variant entre .50 et $1.00, selon le salaire. Les Bénéfices en maladie payés aux employés pouvaient, encore selon le salaire, s'élever de $10.00 à $30.00 par semaine.

Au cours de 1928, 1,606 patients reçurent des traitements; des 2,929 obturations recommandées, 316 furent complétées; des 1,301 extractions recommandées, 132 furent exécutées; 158 pièces de prothèse furent recommandées, dont 32 furent exécutées; en somme, environ 10% du travail recommandé fut complété.

En 1929, le taux s'éleva un peu: 13% du travail recommandé fut complété. Sans aucun doute, la clinique eut une très avantageuse répercussion sur la santé générale. Après trois ans de fonctionnement, les rapports de la compagnie révélaient une sensible diminution d'absence pour maladies rhumatismales et autres semblables. Toutefois, en raison de difficultés financières, la clinique dut fermer ses portes définitivement en 1929. Le coût d'opération en était de $200.00 par mois.

Vers la même époque, un médecin organisa une clinique dentaire industrielle d'un type un peu différent, en ce sens que les employés de brasseries étaient traités à la clinique de l'hôpital général et non dans les locaux mêmes des industries.

Les honoraires étaient fixés sur une base de $4.00 de l'heure, dont une moitié allait au clinicien et l'autre au défraiement des dépenses de cette clinique, dite sans profit. Tous, les cliniciens, y compris votre humble serviteur, étaient des dentistes diplômés et licenciés, dont les services étaient retenus à l'heure, pour quatre heures par semaine.

Deux ou trois ans plus tard, un groupe de chimistes industriels s'intéressa à la dentisterie. Une de ces Compagnies, comptant 170 employés, retint les services d'un dentiste, à temps partiel, à raison de $1.50 par examen, mais aucun traitement n'était donné par le dentiste en question. Les traitements recommandés devaient être réalisés par le dentiste choisi par le patient. Durant les examens qui avaient lieu deux fois l'an, la Compagnie prêtait au dentiste l'un de ses employés pour remplir les fonctions de garde-malade et de secrétaire.

On constata qu'en général les employés négligeaient beaucoup le soin de leurs dents et que, sans l'organisation du système de constatations périodiques et de rappels réitérés tels qu'établis, ils remettaient invariablement à plus tard l'exécution de travaux dentaires, jusqu' à ce que l'accumulation inévitable de soins essentiels occasionne des frais prohibitifs.

Les dentistes, qui exécutaient les travaux recommandés, étaient rémunérés à tant de l'item selon un barême. Ce barême fixé par leur association locale était inférieur à celui de la commission des Accidents du Travail qui, soit dit en passant, en ce temps là, dans la province en question, avait, sinon le tarif le plus

élevé, du moins un des plus élevés, au Canada.

Ce service, discontinué pour la durée de la guerre, à cause de la diminution de dentistes dans la région, doit reprendre sous peu ses activités.

Je m'en voudrais de passer sous silence la belle clinique dentaire de la Brasserie Molson, ici, à Montréal. Cette clinique, une des plus modernes du Canada, est dirigée par notre confrère, le Dr Rupert Wheatley. Les employés y sont examinés gratuitement avant l'embauchage, ainsi que périodiquement une fois l'an. Un système administratif bien organisé, permet de constater, d'année en année, l'amélioration locale ou la négligence de chaque employé. Environ 800 personnes sont à l'emploi de la compagnie. Tous peuvent, s'ils le désirent, faire exécuter à la clinique tous les travaux qui leur sont recommandés; dans ce cas, la compagnie assume environ la moitié des frais et déduit l'autre moitié sur le salaire de l'employé, selon un système à tempérament. En plus du Dr Wheatley, la clinique a, à son service, une garde-malade enregistrée; son équipement est des plus modernes et comprend un appareil de Rayon-X; voisine des services médicaux, elle coopère et collabore avec ceux-ci.

Il serait inutile de prolonger l'énumération et la description des essais en dentisterie industrielle; leur principal intérêt réside dans le fait qu'ils ont attiré l'attention du public et de la profession sur la dentisterie industrielle à un tel point, que l'Association Dentaire Canadienne a cru bon, le 26 mars 1946, de former un comité pour en étudier les divers aspects et faire rapport à l'Assemblée annuelle du Bureau des Gouverneurs.

Le Comité de Dentisterie Industrielle, dont j'ai l'honneur d'être président depuis sa formation, se compose des Drs Rupert A. Wheatley et J. Rae Carson, qui, à l'automne de 1946, succéda au Dr Cyril Flannagan.

Le Comité enquêta sur la dentisterie industrielle, tant au Canada qu'aux Etats-Unis, en Angleterre et en Amérique du Sud; en sollicitant des rapports des Régistraires des Bureaux Provinciaux de Chirurgie Dentaire, des Secrétaires des Associations dentaires et manufacturières, des Chefs de Divisions dentaires gouvernementales, et d'un certain nombre de dentistes Industriels. Le comité coopéra avec la Division Dentaire du Ministère de la Santé et du Bien-Etre Social d'Ottawa, ce qui lui permit d'avoir accès à 5,900 réponses aux 27,000 questionnaires que la Division Dentaire fit circuler de Halifax à Vancouver.

Le comité présenta de volumineux rapports au Bureau des Gouverneurs de l'Association Dentaire Canadienne, à Toronto, en 1946, à Digby en 1947, ainsi qu'à Murray Bay, en 1948. Il prépara aussi un livret sur la dentisterie industrielle, approuvé par le Bureau des Gouverneurs, à Murray Bay, et qui sera publié prochainement par l'Association Dentaire Canadienne. Ceux qui sont intéressés pourront en faire la demande au Secrétaire, le Docteur Gullett.

Tout ceci est fort intéressant, me direz-vous, mais enfin où allons-nous en dentisterie industrielle? Quelle application pratique découle de touts ces études, enquêtes et rapports.

Vous voyez au tableau noir un résumé des recommandations que le Bureau des Gouverneurs de l'Association Dentaire Canadienne adopta à l'unanimité le 25 mai 1946, modifia quelque peu en 1947 et ratifia de nouveau en 1948.

Permettez-moi de vous le commenter en me basant sur le livret auquel je faisais allusion il y a un instant.

Vous avez sans doute constaté, dans le plan esquissé au tableau, que les recommandations sont divisées en quatre parties. (voir tableau)

Les deux premières touchent les divers types de services dentaires possibles dans nos industries.

La troisième touche le processus devant être suivi dans l'organisation et la mise en opération d'un service dentaire industriel. Enfin la quatrième partie traite du personnel requis pour le fonctionnement d'un tel service.

En général, il existe une certaine confusion dans les esprits quand nous parlons, en dentisterie industrielle, d'un service diagnostique et d'un service thé-

Dentisterie Industrielle

Tableau resumant

les recommandations de l'A.D.C.

- 1ère Partie: Services Diagnostiques.
  - 1—Programme diagnostique
    - A) Service d'examen de pré-embauchage.
    - B) Service d'examen périodique.
    - C) Service prophylactique.
    - D) Service radiographique.
  - 2—Programme de soins d'urgence
  - 3—Programme administratif
  - 4—Programme éducationnel
    - A) Conseils individuels.
    - B) Causeries.
    - C) Affiches.
    - D) Films.
    - E) Salubrité.
- 2ième Partie: Services Thérapeutiques
  - A) Liberté de choisir
  - B) Pratique privée
  - C) Clinique
- 3ième Partie: Procédure d'organisation
  - A) Surveillance
  - B) Requêtes
  - C) Soumission des projets
  - D) Pratique privée
- 4ième Partie: Personnel
  - A) Dentistes (note explicative)
  - B) Hygiénistes dentaires

rapeutique. Il importe donc, de bien définir chacun de ces services distincts.

Par Service diagnostique dentaire industriel, nous entendons celui qui se préoccupe de constater l'état actuel de la bouche de l'employé, de lui conseiller les méthodes nécessaires pour conserver sa bouche en bonne santé ou pour remédier à sa mauvaise condition. Il s'agit donc uniquement d'un programme de prévention et non de restauration ou d'amélioration de la bouche malade, si ce n'est dans le sens du conseil professionnel ou dans les cas d'urgence. Il est donc conforme au programme d'hygiène publique, en autant qu'il se préoccupe de la santé dentaire de chaque employé, en raison de la répercussion de ce cas individuel sur la santé dentaire générale du groupe d'employés, dans une usine.

Quant au service thérapeutique dentaire, son programme a d'abord un caractère de restauration tendant à améliorer les dents ou les bouches malades au moyen d'obturations, d'extractions, de pièces de prothèse et d'autres traitements. Il se préoccupe plus de la santé individuelle de l'employé que de la santé publique, c'est-à-dire de la santé globale des employés d'une usine.

Gardons ces distinctions bien présentes à la mémoire, en étudiant les quatres parties des recommandations.

La première partie a trait aux services diagnostiques. Vous remarquerez que l'envergure de ces services, dépasse quelque peu celle que serait tenté de leur donner un praticien privé; puisque ces services se préoccupent de la santé dentaire du travailleur industriel, en autant qu'elle affecte ou qu'elle est affectée par sa santé générale ou son milieu de travail.

Les services diagnostiques se composent de quatre programmes ou départements, comme vous pouvez le constater sur le tableau:

Premièrement, un programme diagnostique.

Deuxièmement, un programme de soins d'urgence.

Troisièmement, un programme administratif.

Quatrièmement, un programme éducationnel.

Le programme diagnostique a pour objet la dentisterie préventive, y compris la détection et le contrôle des maladies contagieuses et occupationnelles, affectant la cavité buccale.

Pour mieux saisir la portée de ce programme, nous le subdiviserons en ses quatre services:

A) *Service d'examen préalable à l'embauchage.* On devrait, au moment de l'embauchage, faire un examen clinique complet et minutieux de la bouche, avec l'aide d'explorateurs et de miroirs, notant la condition des dents, des gencives de la langue, des lèvres, des joues, de la voute palatine, etc . . . Ceci, afin d'établir un diagnostic, pour dépister et éliminer les maladies, tant buccales que d'importance organique.

B) *Service d'examen périodique.* Cet examen de la bouche devrait être répété une ou deux fois l'an, notant toute amélioration ou changement.

On devra faire un examen plus fréquent, lorsque le genre de travail nécessite l'emploi de matériaux ou de techniques pouvant avoir de néfastes répercussions sur la santé buccale de l'employé.

En général, pour ce qui est de certains produits chimiques, le maximum de concentration, auquel on puisse permettre d'exposer les ouvriers est fixé de façon à prévenir l'empoisonnement organique. Toutefois, dans les cas de produits acides, les limites de concentration fixées, quoique n'affectant pas l'organisme en général, peuvent néanmoins avoir des effets désastreux sur la santé buccale, par la dissolution de l'émail dentaire. Une enquête sur les autres risques révélera sans doute que les tissus de la cavité buccale sont vulnérables à d'autres limites de concentration jusqu'ici acceptées, comme étant sans danger et nécessiteront, par conséquent, des examens périodiques plus fréquents.

C) *Service prophylactique.* Il est reconnu qu'aucun examen minutieux soit périodique, soit préalable à l'embauchage, n'est possible en présence de débris alimentaires ou d'un dépôt considérable de tartre dentaire. Pour cette raison, une prophylaxie complète est recommandée, chaque fois que, selon l'opinion du dentiste industriel, un tel procédé peut révéler des irrégularités ou des conditions pathologiques, pouvant se cacher sous ces dépôts de tartre ou d'aliments.

On entend donc ici, par prophylaxie, l'enlèvement des débris alimentaires et autres dépôts, par le détartrage, le nettoyage et le polissage des dents et des obturations. Les affections telles que la sensibilité des gencives, par suite de manipulation fréquente de certains métaux, peuvent être enrayées ou prévenues par la prophylaxie périodique suivie d'une bonne hygiène buccale.

Nous ne devons pas considérer les traitements de périodontie requérant deux ou trois séances comme faisant partie des services prophylactiques du programme diagnostique; ils doivent plutôt être considérés comme faisant partie des services thérapeutiques et par conséquent régis par la deuxième partie des recommandations.

D) *Services radiographiques.* La radiographie complète de la bouche et occasionnellement des radiographies périapicales et "bite-wings" sont recommandées comme aide diagnostique.

Elles peuvent être prises, chaque fois que selon l'opinion du dentiste industriel, il peut y avoir doute sur l'état:

I—Des espaces édentés: fragments de racines, infection résiduelle, dents incluses.

II—De l'apex de la dent: kystes ou autres états pathologiques.

III—Des surfaces interproximales des dents, pour dépister la carie, s o u v e n t invisible à l'examen clinique.

IV—De la structure osseuse: dans les cas de fracture, contusion, blessure, etc. . .

V—De la gencive et des tissus mous: dans les cas de pyorrhée, d'oedème, etc. . .

La radiographie complète de la bouche, durant l'examen préalable à l'embauchage, fournit un dossier complet, exact et permanent, qui peut être des plus utiles, non seulement pour dépister les états pathologiques précitées, mais

aussi pour fin de comparaison, lors des examens périodiques futurs. Par exemple, un état pathologique, qui subséquemment pourrait à tort être attribué à des causes industrielles, sera, soit éliminé ou du moins classifié, comme étant une maladie non attribuable au travail; et si cet état est enregistré de façon permanente sur une radiographie de pré-embauchage, l'on préviendra ainsi des discussions et des troubles inutiles.

En concluant ce programme diagnostique, ajoutons que le Dr Lyman D. Heacock, du Service de Santé des Etats-Unis et Président sortant de charge de l'Association Américaine des Dentistes Industriels, a parfaitement raison de dire que les tissus de la bouche méritent plus d'attention et un meilleur diagnostic que celui trouvé sur les dossiers médicaux des employés de grand nombre d'industries, lesquels ne réfèrent à l'état des dents et des gencives comme "bon," "passable" ou "mauvais".

Jetons maintenant un rapide coup d'oeil sur le 2ième programme, que je classifiais tout à l'heure, comme faisant partie des services diagnostiques.

Le Programme des soins d'urgence se soucie du soulagement à apporter aux douleurs dentaires survenues durant les heures de travail.

Ce service d'urgence prend donc un caractère strictement palliatif, impliquant que le dentiste industriel doit remédier à la douleur survenant au cours des heures de travail, qu'elle soit causée par un accident de travail, par des maladies attribuables au genre d'emploi ou toute autre cause.

Nous ne considérons pas les traitements suivants comme soins d'urgence, ni comme faisant partie des services diagnostiques recommandés:

I—Extractions: Excepté dans les cas où cette opération est l'unique moyen de soulager la douleur survenue durant les heures de travail.

II—Obturations: Excepté celles de nature temporaire, procurant un soulagement aux douleurs survenues durant les heures de travail.

III—Elimination d'infection buccale: Excepté lorsqu'un tel état devient douloureux durant les heures de travail.

IV—Traitements de pyorrhée: Excepté dans les limites prescrites par le service prophylactique déjà mentionné.

V—Réparations des pièces de prothèse.

VI—Nouvelles pièces de prothèse.

VII—Traitements des accidents de travail et des maladies dues au genre d'emploi: Excepté pour soulager la douleur.

Dans les cas de blessures traumatiques de la bouche, des dents, des mâchoires, l'on devra soulager l'employé et lui assurer le plus de comfort possible, jusqu'à ce qu'un travail de restauration puisse être entrepris.

L'employé devrait, pour de telles restaurations, être envoyé à son propre dentiste ou à un spécialiste ou encore aux services traités dans la deuxième partie des Recommandations. Le dentiste industriel devrait toutefois garder un contact direct avec le dentiste, qui traite le patient et ce, durant toute la période de ces traitements.

Le 3ième programme des services diagnostiques est le programme Administratif.

L'objet d'un tel programme ou département est la compilation d'archives précises.

A moins d'avoir un dossier exact et complet sur l'état de l'employé ainsi que des conseils donnés par le dentiste industriel à l'époque de l'examen de pré-embauchage ainsi qu'à celle des examens périodiques, les services diagnostiques perdent beaucoup de leur valeur préventive, puisque c'est là le seul moyen de vérifier si le patient a profité des conseils donnés et s'il a tenté d'améliorer sa santé.

De plus, l'enregistrement de l'examen de pré-embauchage sert de base au dossier de l'employé, pour ce qui est de son état buccal et permet une plus grande collaboration entre les services médicaux et dentaires dans l'évaluation de la santé générale et la classification de cet employé.

Ces dossiers complétés aux examens périodiques permettent, au besoin, des consultations entre les préposés aux services médicaux et dentaires sur l'état de santé réel de certains récidivistes, ceux-ci étant responsables de la majeure partie des visites aux cliniques. En améliorant l'état de santé de plusieurs de ces visiteurs

chroniques, la structure économique de l'industries se trouve enrichie d'employés véritables, qui seront un avantage et non une responsabilité.

En coordonnant les dossiers médicaux et dentaires, l'on pourrait, dans certains cas, trouver le lien existant entre certaines maladies buccales négligées et l'apparition d'un état pathologique organique.

Le résultat de chaque examen individuel devrait être confidentiel entre l'employé et le dentiste. Toutefois lorsqu'un employé souffre d'une infection pouvant contaminer d'autres employés et qu'il ne prend pas les mesures nécessaires de précaution, il doit être rapporté à l'employeur comme indésirable. Cependant le consentement de cet employé doit être obtenu avant de divulguer tout autre détail sur son état.

Les archives devraient être rédigées de façon à révéler à quel point les employés ont recours au service, le nombre de traitements requis par différents départements ou groupes d'employés, le temps perdu en raison de maladies dentaires, de maladies attribuables au genre d'emploi, d'accidents, etc. . .

Des rapports devront être rédigés aussi souvent que demande en sera faite par l'employeur ou le service médical ou encore l'ingénieur préposé au service de sécurité.

Le programme administratif a aussi pour mission de référer les employés à leur propre dentiste pour les services thérapeutiques recommandés, soit en servant d'intermédiaire pour obtenir un rendez-vous, soit en facilitant à l'employé le choix d'un dentiste par la préparation d'une liste des dentistes pratiquant dans les environs.

Le quatrième et dernier programme des services diagnostiques est le programme éducationnel.

Ce programme a pour objet l'enseignement de l'Hygiène Dentaire dans l'usine. L'enseignement de l'Hygiène Dentaire est essentiel à tout programme préventif, il en est la base et en abaisse considérablement le coût.

A moins que les employés ne soient continuellement éduqués sur l'Hygiène dentaire appropriée, ils seront très vite enclins à négliger et à sousestimer les conseils reçus au moment de l'examen. Leur santé générale et dentaire ne s'améliorera pas, le temps requis pour les prophylaxies surchargera le dentiste industriel, les pertes de temps dus aux maladies gingivales et dentaires ne diminuera pas, les traitements d'urgence deviendront trop fréquents et requéreront trop de temps, enfin le projet entier deviendra utopique et, sur le plan économique, trop coûteux.

Le dentiste devra donc, durant l'examen de pré-embauchage, ainsi qu'aux examens périodiques, discuter avec l'employé l'avantage que lui procureront des soins suivis et complets aussi bien que les néfastes répercussions que peut avoir sur sa santé générale la continuation de l'état septique de sa bouche.

Sachant que sa bouche sera vue, examinée périodiquement, l'employé se sentira une certaine obligation morale de recourir aux traitements conseillés, pourvu que les remarques du dentiste soient suffisamment convainquantes. Le miroir, que l'employé tient dans sa propre main et dans lequel il constate l'état de sa propre bouche, est souvent plus convainquant qu'un film cinématographique traitant d'états pathologiques de personnes anonymes.

Lorsque la chose est possible, le dentiste industriel devrait faire suivre ses conseils individuels de conférences ou de courtes causeries sur l'hygiène dentaire devant tous les employés d'un ou de plusieurs départements de l'usine, en insistant sur le défaut ou la maladie prédominante du groupe.

Le dentiste ne devrait pas sousestimer la valuer des affiches portants des images ou des thèmes frappants placées à des endroits stratégiques, à intervalles réguliers et durant une période assez longue pour frapper l'esprit de tous ceux, qui les voient. Il devra aussi profiter des films sonores et silencieux mis à sa disposition gratuitement par le Ministère de la Santé et du Bien-Etre Social, ainsi que par les Ministères de Santé Provinciaux et d'autres sources.

Le dentiste industriel devra enfin curveiller la salubrité de l'industrie, conseiller à l'employeur l'installation de verres de papier ou de fontaines hygiéniques, dépister et éliminer les habitudes non-

hygiéniques dans les cantines et cafétarias controlés par la compagnie, en un mot, il doit promouvoir l'Hygiène Dentaire dans l'usine.

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La 2ième partie des Recommandations a trait aux Services Thérapeutiques.

Tous les soins dentaires, que nous n'avons pas mentionnés, comme faisant partie des services diagnostiques, doivent être considérés comme étant des services thérapeutiques et deviennent le sujet de la Deuxième Partie des Recommandations.

Ceux-ci sont considérés comme étant des soins dentaires de nature restaurative; ce qui signifie que de tels traitements sont administrés dans le but de restaurer une dent ou une bouche malade à un meilleur état de santé.

Ces services thérapeutiques peuvent varier considérablement selon les programmes industriels et peuvent aussi bien être limités à l'élimination d'infection buccale qu'étendus à quelques-uns ou à tous les traitements offerts dans un bureau de dentiste.

Permettez-moi d'attirer votre attention au fait que les services thérapeutiques dentaires industriels ne sont pas recommandés par l'Association Dentaire Canadienne. Toutefois l'Association reconnait que, dans des circonstances spéciales, certaines industries peuvent désirer donner des services plus élaborés que ceux de Diagnostique, dont nous parlions il y a un instant. Par exemple, dans les industries, où les employés travaillent 12 heures par jour, et ne peuvent voir leur dentiste durant ses heures normales de bureau, ou encore dans les industries situées à des endroits, où il n'y a pas de dentiste. D'autres motifs trop nombreux, pour être énumérés ici, peuvent susciter dans certaines industries le désir et le besoin de fournir des services thérapeutiques dentaires surtout quand les circonstances sont peu favorables à la pratique privée.

Donc, quoique l'Association Dentaire ne recommande pas les services thérapeutiques dentaires industriels, elle a cru bon de spécifier trois recommandations, quant aux industries désirant un service de santé dentaire plus complet que celui qu'elle recommande et que nous avons étudié il y a un instant.

A) La première de ces trois recommandations spécifie:

"Que l'employé devrait avoir le privilège de choisir son propre dentiste." Ceci se passe presque de commentaires, car il est reconnu que l'on ne doit pas forcer l'employé à se faire soigner par le dentiste industriel. La liberté de choisir est un principe vital, dont dépend le succès de tout programme thérapeutique dentaire industriel; le patient doit libre de choisir son dentiste et le dentiste libre de choisir ses patients. Là où il n'y a plus de liberté d'inquisition et d'expression, il y a peu ou pas d'amélioration possible.

B) La deuxième recommandation stipule:

"Nous croyons qu'en Art Dentaire les meilleurs soins peuvent être obtenus par le moyen de la pratique privée." Les traitements devraient donc être donnés à l'employé par le dentiste de son choix dans le bureau privé de ce dentiste, à moins que les conditions ne soient pas favorables à la pratique privée.

Les deux recommandations précitées sont basées sur les principes qui régissent toute la question d'Hygiène Dentaire Publique. La vérité de ces principes a été reconnue par les membres de la profession dentaire, tant d'après l'étude des plans existant dans d'autres pays, que par l'expérience pratique.

La troisième recommandation se lit comme suit:

"Toutefois lorsqu'une industrie préfère un service dentaire, genre clinique, afin d'assurer la qualité du service, nous recommandons que le dentiste soit rémunéré de façon équitable et adéquate."

Le succès de tout programme dentaire industriel tient en grande partie des qualifications du dentiste responsable de la mise en oeuvre de ce programme.

(*à suivre*)

Nécrologie

LE DOCTEUR ARTHUR LANGLOIS

par PHILIPPE HAMEL, L.C.D., Québec

Le cinq juin 1949, décédait à Québec un chirurgien-dentiste remarquable, un des premiers élèves québecois de l'Ecole moderne en dentisterie, Arthur Langlois.

Natif de la Grosse-Ile (25 juillet 1872), il poursuit ses études classiques au Séminaire de Québec d'où il sort, en 1893, avec le titre de bachelier ès arts.

Licencié en chirurgie-dentaire, le 8 octobre 1897, le docteur Langlois ouvre immédiatement son cabinet de dentiste sur la rue St-Jean, pour y exercer sa profession quarante et un ans durant, avec une ponctualité digne de toute éloge, une application constante et un désir persévérant de suivre les derniers progrès de la science dentaire.

Dès huit heures du matin, jusqu'à six heures de l'après-midi, vous trouvez Arthur Langlois au poste de travail. Il s'absente tout juste une heure, le midi, pour refaire ses forces.

Sa clientèle, il l'a servie dans un cabinet de dentiste plutôt modestement meublé, comme tous les bureaux de ce temps, mais il l'a servie avec haute conscience et parfait dévouement. Peu de praticiens comptent à leur crédit autant d'heures consacrées au service des patients. Son travail, il l'a accompli, en majeure partie, à une époque où le dentiste recevait peu l'aide des gardes, à une époque, où il devait remplir tous les rôles, celui de technicien dentaire, comme celui de teneur de livres, de comptable et de téléphoniste. Les honoraires par trop modiques dont devaient se contenter les professionnels d'alors, vu les ressources fort restreintes de la population, contraignaient les dentistes à de très longues heures de travail et à un "modus vivendi" marqué au coin de l'économie.

En 1902, il épouse mademoiselle Eva Hamel, fille ainée de feu Théofred Hamel. De cette union, naissent trois fils: Marcel, médecin-pediâtre; Antoine, comptable agréé; Rémy, chirurgien-dentiste; et trois filles: Charlotte (madame Valmore Bienvenue); Justine (madame Renaud Miville Dechesne); et Monique (madame Dr Maurice Royer).

Il laisse ainsi, pour lui survivre, une famille d'une rare distinction, précieux couronnement d'une vie utile bien remplie.

Sa démarche sans affectation, son accueil simple, son regard limpide et franc reflétaient chez Arthur Langlois, avant même qu'il ne prononce un mot, le professionnel au commerce agréable, au conseil sûr, désintéressé, le professionnel dépourvu de tout mercantilisme.

Causeur agréable, sachant écouter avec intérêt son interlocuteur, il aimait la jovialité, tout en recherchant la conversation sérieuse. Dans les plus vives discussions, il trouvait, pour confondre son adversaire, une réponse toujours courtoise mais doublée d'une logique foudroyante, partage singulier des âmes droites.

Parfait chrétien, animé d'une foi robuste, il a aimé profondément sa religion, sa famille et sa profession; ce qui lui a valu le respect et la consideration de tous.

L'Université Laval le nomme professeur agrégé à la Faculté de Médecine en 1922, puis professeur émérite en 1940. En 1944, il devient membre bienfaiteur de Laval.

Chef de service à la Clinique dentaire à l'Hôtel-Dieu de Québec en 1907, il y commence, en 1923, des cliniques pour les étudiants en médecine.

En 1924, il est nommé Chef du Département dentaire de l'Hôpital St-Michel-Archange.

De 1924 à 1934, il siège comme membre du Bureau des Gouverneurs du Collège des Chirurgiens-Dentistes de la province de Québec.

De 1930 à 1932, il devient président de ce même Collège. Par une heureuse coïncidence, il remet lui-même, à titre de président, la licence en Chirurgie dentaire à son fils Rémy, le 14 mai 1932.

Le Collège des Chirurgiens Dentistes le place sur la liste de ses membres honoraires, en 1939.

La Société de Stomatologie de Québec, qui célèbre, cette année même, son vingt-cinquième anniversaire, le compte au nombre de ses membres fondateurs et de ses membres les plus assidus.

L'intérêt que portait ce confrère au maintien du prestige de sa profession et son désir de le rehausser, malgré des obstacles quasi-insurmontables, nous en trouvons une des nombreuses preuves dans le solide et courageux discours qu'il prononçait devant le Bureau provincial de Chirurgie dentaire le 29 mai 1926. Ce discours, en raison de son importance, a été reproduit "in extenso" dans le rapport annuel du Collège des Chirurgiens Dentistes (pp. 25 à 29, 1926-27). Il mériterait une nouvelle diffusion parmi tous les membres de la profession. Les jeunes confrères apprendraient qu'on a même accepté à l'étude de la Chirurgie dentaire des élèves sortant de la Classe de Belles-Lettres, préférant ainsi le nombre à la qualité des élèves. Renseignés de la sorte, ils comprendraient peut-être davantage la valeur du précieux héritage, dont ils ont désormais la garde.

Arthur Langlois s'insurgeait alors avec vigueur contre une nouvelle proposition de la Faculté de Chirurgie dentaire de l'Université de Montréal, pour ne pas exiger le baccalauréat avant l'étude de la Chirurgie dentaire, condition requise cependant par la profession, de 1892 à 1920.

Bien qu'on eût accepté des étudiants en Chirurgie dentaire sortant de la seconde, puis de la rhétorique, il avait été convenu qu'en 1927, l'Université de Montréal exigerait de tout candidat à l'étude de la Chirurgie dentaire, le titre de bachelier ou l'équivalent.

Cette nouvelle demande de la Faculté constituait donc un manquement à une promesse solennelle faite à la profession.

Ecoutez Arthur Langlois:

"Le temps venu d'exécuter les promesses, l'on a passé outre, comptant, je présume, sur notre vigilance distraite par tant d'autres difficultés à surmonter. Et l'on nous propose, aujourd'hui, afin de légaliser un manquement à la parole donnée, un projet de loi dont l'objectif ne peut être que celui d'amorcer vers la dentisterie, la jeunesse sans culture suffisante, en la détournant du cours classique, dès la fin de la Rhétorique."

Puis stigmatisant la mentalité de certains professeurs, il s'exprimait ainsi:

"Pourtant le profession tient à la conservation de ses privilèges, de ses idéals traditionnels, et déplore, depuis longtemps, la mentalité dans ce milieu où, sans exception, devraient germer les plus nobles aspirations, dans ce milieu vers lequel devrait aller sans amertume et sans défiance, notre filiale affection.'— Paroles pénibles à prononcer mais combien vraies, combien courageuses!

Pour finir, je détache un paragraphe de sa péroraison tout empreinte de sa droiture:

"Nous terminons bientôt,. messieurs, notre terme d'office comme gouverneurs. Allons-nous clore notre tâche en sacrifiant les vieilles traditions respectées de nos prédécesseurs? Allons-nous renoncer à une amélioration garantie par une promesse, qui lie l'honneur de l'Université de Montréal et soldée par le lourd poids d'une loi rétrograde? (1) S'en trouvera-t-il parmi vous qui, oublieux de leur devoir envers notre profession, écouteront les conseils de gens mal avisés, subordonneront les intérêts généraux aux intérêts particuliers?"

Ce discours flétrit une des périodes les plus attristantes qu'ait vécue la profession dans cette province et contient un fort réquisitoire contre cette régression dans la culture exigible des futurs candidats à l'étude de notre profession, régression voulue, disait notre regretté confrère, par un esprit de lucre qui alors animait certains membres de la Faculté de Chirurgie dentaire de l'Université de Montréal.

A tout risque, ce vaillant s'est dressé contre toute une équipe de professeurs à courte vue. Il a soutenu le bon combat avec l'appui de l'Université Laval—celle-ci tout étonnée qu'il faille combattre une Faculté pour prévenir un abaissement du niveau intellectuel d'une profession.

En plus, il a été secondé par tous ses confrères québecois et une foule d'autres dentistes de cette province. Le Bureau

(1) Loi qui autorisait les élèves sortant de la classe de Seconde d'un Cours classique, d'étudier la chirurgie dentaire sans autre qualification.

des Gouverneurs lui-même adressait une lettre assez sévère à Monseigneur le Recteur de l'Université de Montréal, le 4 octobre 1926, (2) appuyant les vues d'Arthur Langlois.

La lutte n'en a pas moins été temporairement perdue. Le manquement à la parole donnée par les autorités d'une Faculté dentaire laisse Arthur Langlois et ses amis déconcertés, mais résolus de ne pas mettre bas les armes.

Huit ans plus tard, le 13 janvier 1934, Arthur Langlois signait, avec six autres membres du Bureau des Gouverneurs, une lettre de démission du Bureau provincial de Chirurgie dentaire (3). Cette lettre raconte comment on avait trompé la profession depuis 1920, en laissant entrer qui voulait à l'etude de la Chirurgie dentaire et se termine ainsi:

"Chers confrères, nous avons voulu servir notre profession avec complet désintéressement. Nous ne doutons pas que vous ayez tenu à faire de même, mais nos idées sur l'autorité d'un Bureau provincial de Chirurgie dentaire et le respect que l'on doit exiger de ses règlements sont tellement à l'opposé de l'esprit, qui prévaut dans ce milieu, depuis un quart de siècle, que nous croyons de notre devoir de ne plus partager la responsabilité d'un Bureau, qui persiste dans une voie conduisant fatalement à la perte totale d'une autorité déjà compromise. Nous vous prions donc de bien vouloir accepter notre démission comme membre du Bureau provincial de Chirurgie dentaire."

Nous trouvons là un nouveau geste de crânerie de la part de cet éminent confrère. Lui, ex-président du Collège, démissionner comme membre du Bureau des Gouverneurs plutôt que d'accepter un compromis, qui ratifiait une répudiation d'engagements officiels, quelle noble attitude!

Cette haute lutte pour l'amélioration de la culture chez les dentistes auréolera son nom dans l'histoire de notre profession.

Evidemment, une telle situation ne pouvait durer. Après quelques années, un heureux changement s'opéra à la Faculté. Un nouveau Doyen, d'une tournure d'esprit bien différente, y suscita un nouvel élan vers les sommets, et Arthur Langlois connut tardivement, après qu'une grande épreuve l'eut malheureusement mis hors de combat, un redressement complet à la faculté de Chirurgie dentaire de l'Université de Montréal.

Son amour du travail, Arthur Langlois en donnait de nouvelles preuves, lorsqu'il fut frappé d'hémiplégie (18 janvier 1938). Dès qu'il retrouva quelque peu l'usage de ses membres perclus, il retourna, tous les jours, pendant neuf ans, avec la même ponctualité que jadis, à son ancien cabinet de dentiste, pour accompagner son fils, le docteur Rémy Langlois.

Bien qu'inapte au travail, il voulait encore vivre dans cette atmosphère de labeur, d'assiduité et de contentement. Il conservait ainsi l'impression de ne pas capituler devant le devoir et de demeurer au poste jusqu'au bout.

Arthur Langlois personnifiait un des humbles et magnifiques gardiens d'une profession qu'il a exercée avec dignité et une inlassable énergie. Il reste un exemple pour nous et les générations montantes. C'est le plus bel élope que ses confrères puissent déposer sur sa tombe. Nous y joignons une ardente prière et un adieu ému.

22 Place d'Aiguillon.

(2) Rapport du registraire du Collège des Chirurgiens-Dentistes pour les exercices 1926-27, et 1927-28, pp. 30, 31, 32, 33, 34.

(3) Rapport du Collège des Chirurgiens-Dentistes de la province de Québec (1932-33, 1933-34) pp. 22-25.

FEDERATION DENTAIRE INTERNATIONALE

(F. D. I.)

Fédération Dentaire Internationale
Session Annuelle 1950

Au cours de la dernière séance tenue à Milan, le Conseil Exécutif de la Fédération Dentaire Internationale a accepté l'invitation faite par le Comité National Français de tenir la prochaine session annuelle à Paris.

Le Conseil est heureux de pouvoir accepter cette invitation, parce qu'elle permettra de célébrer d'une façon particulièrement solennelle le 50e anniversaire de la fondation de la Fédération. C'est en effet en 1900, et à l'initiative du regretté Dr Godon, que furent jetées, à Paris, les bases de notre institution.

Le Comité d'Organisation envisage un programme particulièrement brillant pour assurer cette célébration et il a été décidé de choisir comme date la fin du mois de juillet et de faire coincider la session avec les Journées Dentaires de Paris, qui se tiennent habituellement en novembre, mais dont la date sera exceptionnellement modifiée.

Cette combinaison de deux grandes manifestations professionnelles permettra donc à de très nombreux membres et sympathisants de la Fédération de se réunir, les semaines dentaires leur donnant l'assurance d'un programme et de travaux scientifiques d'un intérêt particulier.

Le Comité Français d'Organisation est placé sous la présidence du Dr Jean Deliberos.

Les praticiens, que ces manifestations intéressent, recevront en temps utile et au fur et à mesure des progrès de l'organisation, toutes les informations nécessaires. Pour renseignements, s'adresser au Dr Watry, Secrétaire Général de la F.D.I., 35 Rue Souveraine, Belgique.

Le dentiste doit se déranger la nuit

Un cas de déontologie a été soumis récemment à l'arbitrage du National Health Committee, en Angleterre. Il s'agit d'un malade, ayant présenté une hémorragie gingivale importante, après une extraction dentaire pratiquée, la veille. Il s'adressa à un médecin, qui estima qu'il appartenait au dentiste, qui avait extrait la dent, d'intervenir. Celui-ci fut appelé vers 1.30 hr. du matin et refusa de se rendre au domicile du malade, en disant que le traitement de ce dernier ne le concernait pas et qu'il n'avait qu'à s'adresser à un médecin. Il ajouta qu'au cours d'une carrière de 35 ans, il n'avait jamais été prié de faire une visite au milieu de la nuit pour semblable incident.

Le National Health Committee a fait savoir au dentiste qu'il était dans l'erreur et qu'il avait à présenter ses excuses au médecin; de plus il a signalé la chose au Ministère de la Santé, en demande que de semblables cas soient réglés, une fois pour toutes, par une instruction officielle.

MEDECINE ET HYGIENE, 1er septembre 1949.

"Nous avons un beau métier parce qu'il nécessite du savoir, de l'adresse et qu'il comporte des responsabilités. Il faut que les difficultés rencontrées soient pour nous l'occasion de nous préparer à supporter mieux les suivantes au lieu de nous laisser démoraliser, parce qu'alors celles qui suivraient nous sembleraient insurmontables."

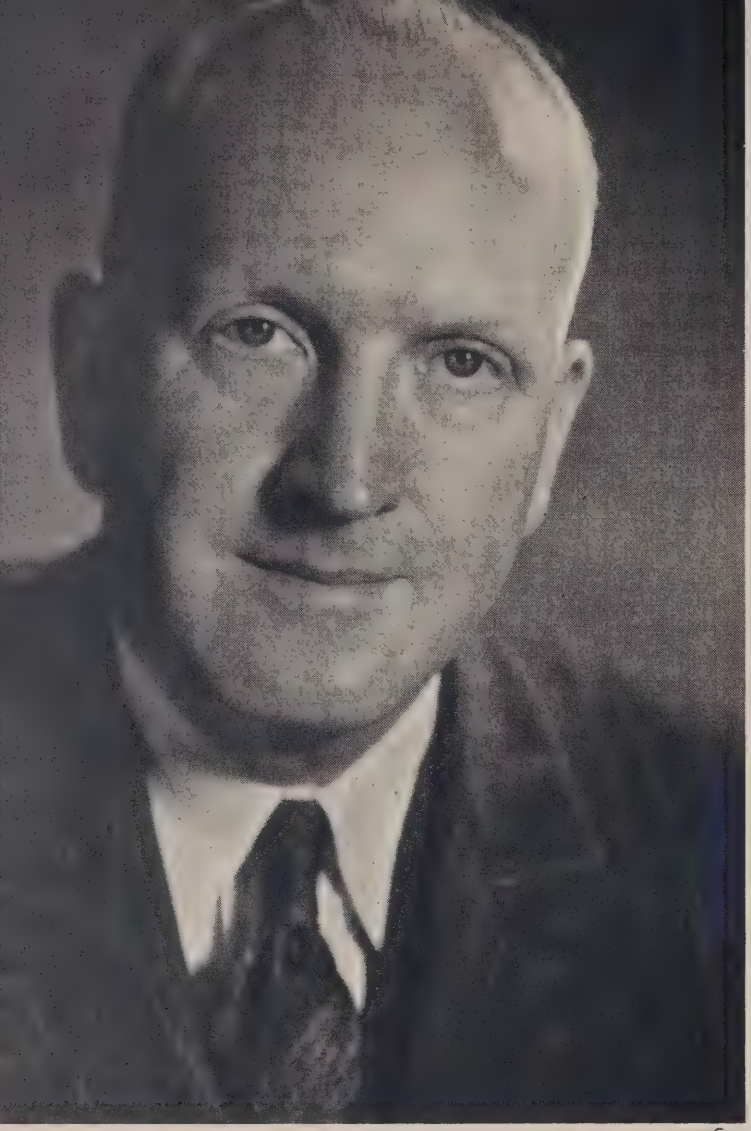
Fernand Brochère—*"Les problèmes de la pratique quotidienne"*.

Paradise Valley, Mount Rainier, Washington

A Christmas Prayer

We open here our treasure and our gifts;
and some of it is gold,
And some is frankincense,
And some is myrrh;
For some has come from plenty,
Some from joy,
And some from deepest sorrow of the soul.
But Thou, O God, dost know the gift is love,
Our pledge of peace, our promise of good-will.
Accept the gift and all the life we bring.

Herbert H. Hines



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DENTAL PUBLIC HEALTH*

by L. W. C. STURGEON, M.D., D.P.H., Welland, Ont.

TWENTY years ago this country along with the other countries of the world was in the beginning of a major depression. This depression followed a period of prosperity and major changes in our economic set-up. This in turn resulted or had its beginning in the First Great War. Previous to the First Great War we could say that Canada as a nation was essentially rural in character. There was little need for our people to live in other than a rural environment. When the war broke out it became necessary that people in this country change their method of living so that they might produce those implements of destruction because the Mother Country found herself unable to do so as had been the case in all previous conflicts. This fact produced changes in more ways than one. There was a shift from a rural to an urban mode of living. If people were going to be engaged in manufacturing, then they must live near industry. As is well known when people are herded together in communities there is a demand for certain protections. We have police and fire protection to name the basic essentials. People living in urban areas do not have the security that is to be found when they are essentially rural dwellers. Their mode of living in all respects is fundamentally and definitely changed. Financial security is lost when they are removed from the farm, inasmuch as so long as they live on a farm they can survive unemployment or other causes which would ruin an urban dweller very quickly. At the same time it must be pointed out that their standard of living when they make the change from rural to urban conditions is usually changed; generally an improvement results. I say generally advisedly, because it is a well-known fact that people leaving the security of the rural areas where they are always sure of living reasonably well, off the land, may or may not improve their lot in life. Either they become high wage earners, or in some cases revert to living in slum conditions. However, in this country as in England and the United States, we can say that the general standard of living is improved when the country becomes industrialized. This has been the goal of all people since time began, namely that they should improve their standard of living, and much is said about this by politicians, writers, sociologists and so on.

This change to living in urban areas and being engaged in industrial activity is probably not anything more than a reversion to a previous state which had been changed due to unfortunate circumstances. In the Province of Ontario particularly, most of the early settlers were not essentially rural dwellers before they arrived in the wilderness. Many of them migrated because they had to keep on living. They represented an industrial and

*Presented at a joint meeting of the dental clubs of Montreal under the auspices of the Montreal Dental Club, April, 1949.

business class who through force of circumstances, famine or loss of work had to seek new places in which to live if they were going to survive. Therefore, the change back to urban conditions, as I have said, was not an essential change, but rather a reversion to a previous state.

Living under urban conditions and working in industry made these people dependent on economic conditions, either in their own country or elsewhere, over which they had little or no control. Working and living under urban conditions also made the population more susceptible to the results of disease and other conditions than they would have been had they remained in the rural areas. Epidemics became more prevalent and more deadly because of the fact that people were contiguous to each other. Housing, sanitation, water supplies and all the other factors influencing health made a greater impact on the individual. These people, therefore, demanded some form of so called social security. Being subject to lay-offs from work due to age, the first thing we see in our social structure developing was the problem of old age pension. This has been followed by Workmen's Compensation, Unemployment Insurance and the most recent is the demand for better medical attention, which would be continuously and readily available to the individual regardless of circumstances.

The demand for the latter has been met for many years through the Civic Hospitals where a certain number or percentage of the population was able to receive medical care as out patients or in patients in the hospital, regardless of their financial ability to pay. From this, of course, developed the demand that such services be available to all people and since the majority of the population came within a certain income bracket it naturally followed that to all intents and purposes the great mass of the population felt that this was their due. In other words, not only did the world "owe them a living," but along with this the world "owed them the best medical attention that was available."

To add to this, following the depression from the years 1939 to 1945 another war was thrust upon the people. This in turn was followed by another and greater exodus of the population to industrial areas, again due to demands from other countries for supplies. In addition during this war approximately 1,000,000 people from our population representing one twelfth of the total population were engaged in the armed services. In this war in contrast to the previous war both sexes were involved.

Results of War

Another evolutionary change in this last conflict was the fact that medical and dental services were organized on a basis which closely approximated ideal conditions. This was particularly true of the dental service. In the First War it was not until late in the conflict that the Canadian Dental Corps became an entity in its own right. This did not apply in the Second War. Due to the efforts of Brigadier Lott in the interval between the wars, the Dental Services were well organized and ready to give the best service possible to those in the service. Consequently we had a large percentage of our population benefitting by, and having free access to, the best in medical and dental services. When they returned to civilian life, naturally they missed this free access to what they felt they were entitled to, and there arose a demand for a similar situation in peace time. As far as medical practice was concerned there had been previous to the war in operation prepaid medical care plans. This did not apply to Dentistry. In Medicine we had the services available in hospitals, we had Public Health services set up after the First War on a rather extensive scale, and thirdly we now had the prepaid Medical Plan. The latter in conjunction with hospitalization plans made available, chiefly through industry to a large percentage of the population medical care of a very high order. Undoubtedly, medical

practice had been improved by the experience gained during the time of battle. This was true after the First War, and certainly it was more so after the second conflict.

Research was given free reign during the last Great War when monies were available without restriction. The problem had to be dealt with if we were to survive and man being the type of person he is put forth efforts freely and supplied money so that he would survive. Medical practice profited by this situation. Undoubtedly the same can be said for Dentistry. To those of us who were closely associated with the dentist during the period of the last war it was a constant source of amazement at what could be accomplished in the dental field. On the stations the number of dentists available was the same as those engaged in pure medical pursuits, but another fact that was apparent to all of us was the extreme and deplorable dental state of the recruits entering the various branches of the Service. After the First War as I have stated above, preventive services were developed on a limited scale. After the Second War these were enlarged because of the findings when these recruits were examined. Governments and other organizations had serious food for thought from these findings. They decided that something would have to be done about it. Therefore, we see that in the provinces the preventive services were enlarged due to the fact that grants of a substantial nature were made to municipalities to put their preventive services as it applied to medical matters on a full time basis employing specially qualified personnel to carry them out.

Preventive Dental Services

Now, what about Dentistry? Despite the fact that the preventive medical services were enlarged at the Provincial as well as the Federal level, little was said about Dentistry and Dental Health. However, the dental profession was extremely cognizant as a result of the findings in the recruits, of the need for some enlargement of preventive dental services. In our own province, through the efforts of the Dental Public Health Committee of the Ontario Dental Association, the Ontario Division of the Canadian Red Cross was persuaded to set up Preventive Services as they applied to Dental Health. Consequently during the year 1946 our Board of Health of the Welland and District Health Unit was approached by Dr. Sandy MacGregor and his committee to institute a pilot program to apply preventive practices to the field of dentistry. It did not take much persuasion to convince me that such a service was an absolute necessity in any Health Program. Due to my experiences during the war and afterwards when I started to examine large numbers of school children it was apparent that dental ills affected practically 100 per cent of the population. My Board of Health agreed to this proposition because I recommended it primarily. Secondly, of course, it was not going to cost the municipalities anything. There was not too much experience available as to what form this program would take. However, the committee decided it would be concerned with yearly examinations of all school children with the charting of the findings and with an educational program directed at having the parents of the school children do something about the conditions as found. In addition it was necessary to persuade the practising dentists who were grossly overworked in any case, to change the mode of practice and spend more time on children's dentistry. Pedodontia as a specialty in dentistry was something new and the dental profession found themselves in the same situation as the medical profession had been in the years following the First Great War. Pediatrics as a profession had been very narrowly practised previous to that holocaust. The dental profession was approximately twenty years behind the medical profession in the practice of Dentistry as it applied to children. Our local dentists reported that they were probably seeing on the average of one child per day. If anything

was to be accomplished this had to be increased five or six times. Naturally there was some antipathy on the part of the dentist to change his practice. Dealing with terminal results as it applied to Dental Health was undoubtedly a more lucrative branch of the profession and essentially easier. Children when it comes to dentistry are stated to be notoriously hard to deal with. However, the state of children's minds is in turn entirely dependent on their parents' attitude, and we can safely say that a great part of our population, particularly those people who had been in the armed services were more susceptible to the necessity of proper care in their infants. Just as they now take it for granted that their children will have the best medical care that is possible; so they readily accepted the principle that the same should apply to their children's teeth. Of course the others only accepted this principle when they had been subjected to an educational program such as we had established in our Health Unit through the good graces of the Ontario Division of the Canadian Red Cross and the interest displayed by the Public Health Committee of the Ontario Dental Association.

I refer here to the great bulk of the population, naturally there is a small core which constitutes about 10 per cent who will have no part of preventive services whether it applies to Dentistry or Medicine. In other words this is the parent who consistently neglects his child and his neglect is not confined only to the health of the child, but rather to the whole body.

Need for Education

Until such times as the educational program as it applied to dental health was brought to the attention of this great majority of parents, their ideas about many of the necessities for good dental health were concerned chiefly with the fact that the deciduous or foundation teeth were something that were shed like winter underwear at a certain time during the child's life and there was no point in protecting and taking care of these teeth. Despite the fact that dentists have been practising their profession for a great many years, this false thinking was still present in the people's minds, and we do not need to restrict it to the general populace, but it probably was being found ingrained in most professional people other than dentists. I trust it was not prevalent in dentists' minds, although sometimes we wonder about that fact as well. I am quite satisfied that professional people engaged in public health previously had fallen into this wrong way of thinking. The fault probably, could be laid at the door of the universities from which medical personnel, nurses, and others received their training. Again, maybe the dentists had not been very aggressive in their educational procedures themselves. I think that this last statement is true. Any of us who have seen work being done by the average dentist these days is amazed with the perfection of the mechanical procedure carried out even in the dental colleges. We can say that those engaged in the public health and preventive medicine fields after the first war had paid too little attention to the dental health of the individual with whom he came in contact. What were the results? Examination of recruits as stated showed a deplorable condition. This was not confined to the lower income groups. I personally served in the Royal Canadian Air Force and those recruits taken into air crew had to have a certain standard of education. It would, therefore, follow that most of them probably came from middle class homes or better. They did not draw large numbers from the 10 per cent that I have mentioned, but it was found that the dental condition among these people who should have had dental care were not receiving it. The cause cannot all be laid to finances, but rather to lack of knowledge.

Program

The program as originally set up consisted of the following:

1. A Dental Public Health Committee was appointed. This was represen-

tative of the professions, Dentistry, Nursing Services, Medical Service, representatives from organizations connected with the schools and so on. This committee met in the early stages frequently and the problem in general was discussed and what was proposed to be carried out.

2. The second stage was the examination of all the children in the primary and secondary schools. This was carried out by Dr. Honey assisted by a recording clerk who transcribed his findings to the approved and recommended chart. When the examination was finished a card showing what the condition was, whether there were no cavities, whether there were cavities to be treated, whether the child needed orthodontia, or whether the child needed prophylaxis, or whether although having no cavities they should have bite wing x-rays. These were distributed to the children with the idea that they would be taken home and action would be forthcoming. At the same time the Public Relations Committee of the Ontario Dental Association decided that this expected influx of children into dental offices could not be met by the local profession and therefore, two recent graduates were sent to the City of Welland to work in one of the dentist's office who through illness was not carrying on his profession. The next problem of course was whether or not sufficient children would be forthcoming by appointment to keep these two dentists busy. These young men were restricting their practice to children's dentistry. At the end of a week or ten days, the number of appointments on their books was seen to be not sufficient so the Dental Public Health Committee was called in with the members of the Home and School Organizations. These latter did a superhuman service. When the situation was explained to them they personally canvassed parents of children needing dental care and within a few days the appointment books for these two dentists were filled up for the six or eight weeks they were going to be in the city. This fact demonstrated the advantage of having a good Dental Public Health Committee and secondly the advisability of using all the voluntary organizations in the community.

Findings

Now as to findings! As the result of these examinations carried out by Dr Honey, it was found that on the aver age there were approximately five cavities per child throughout the total school population. The number of prematurely extracted teeth, namely 5,280, and the teeth to be extracted prematurely 6,969 on the basis of 6,178 pupils examined will demonstrate the situation as it was found from the preliminary first year examination. Only one child in five had had any restorative treatment and there were 31,500 dental cavities among the children examined. Another important finding was the fact that of those children showing poor dental conditions most of them had the habit of eating between meals. This had particular reference to the habit of eating food just before going to bed. This food was usually high in starch and sugar, the most common being cereal, milk and sugar, soft drinks and hot chocolate drinks with a sandwich I do not think that the area in which we work is any different from the other communities in Canada. As a matter of fact it should be a little better, inasmuch as we have in general a comparatively high income group, so that the findings as demonstrated after the first year's examination would probably apply to any part of Canada. We have reason to believe this because our Health Unit has enlarged by the addition subsequently of other municipalities. In this way we have the advantage for some control in our experiment because it is possible to make comparisons as new municipalities are taken under our supervision.

The educational program resolved itself into the fact that Dr. Honey addressed the children in the schools and also gave demonstrations to teachers of what the findings were. The teacher is a most important part of the program. Children in general attending

schools, particularly in the early age groups, are most susceptible to what advice and guidance the teacher can give. No one should overlook this fact. It is quite possible, in my opinion if the teachers are all sold on the program, that the major part of the education can be obtained from this source. This is only right and proper, because after all these teachers are authorities on education and know the proper method of instilling it in their pupils.

Records and Statistics

The examinations at the schools only constitute part of the work. It is necessary in any organization if one is to know how much is being accomplished to have adequate records and statistics. It was therefore, decided to adapt the system presently being used in our own offices to the dental program. The charts were numbered and filed. Index cards were made in duplicate. One index card was used as an alphabetical index and the other one was set up chronologically so that we would have a picture by age groups which is most important. This latter card, the chronological one, was then signalled on one or more of the fourteen spaces available to indicate the conditions that had to be dealt with. In this way anyone concerned with the program, whether it was dental or medical personnel could at a glance tell where the major problem was.

On subsequent examinations when the charts had to be drawn for the different schools, all that was necessary was to have a nominal roll of the pupils attending the school and the charts could, therefore, be drawn out and taken to the school before the examination. We have a system of operating whereby children that move from one school to another or leave the districts are shown on transfer slips which information is passed along to the Dental Division so that they do not carry out any needless procedures in drawing charts for pupils who have left the schools.

In addition to these examinations carried out by the examining dentist in the schools, therefore, it was most important that an intensive educational program be undertaken. This program was to be directed towards everyone, but naturally the most receptive part of the community would be that great bulk of the population who were ready and willing and who could afford to take care of their children's teeth.

When the program commenced it was apparent to me that something else was needed rather than routine examination of school children. We all know that the foundation teeth are present in their full numbers at approximately 2½ years of age. The ground work for these teeth has been laid in the prenatal period. Therefore, it was apparent that after the first stages of the program, namely that of examining all the children we would have to extend our work into the preschool and further into the prenatal groups. Dr. Honey who is carrying the work on in the Unit came to appreciate this as well and I am sure that the Dental Public Health Committee of the Ontario Dental Association also realized it. Therefore, starting in the second year, Dr. Honey gave instructions at the Child Health Conferences, and to mothers of young children who had not acquired their full set of deciduous teeth. Starting with these age groups, the program is designed to carry through and follow these children until the time that they reach school and eventually finish their academic education.

Kinsmen Club Assists

Early in 1948 the local Kinsmen Club approached the Health Unit with regard to any project we might have with which they could help. Their idea was primarily to furnish money for treatment. Dr. Honey, after consultation with the Dean of the Dental Faculty at the University of Toronto decided that their efforts could be best directed towards an educational program. Therefore, they were asked to visit parents of children who had attained the age of six months, handing them a card from the Kinsmen Club

along with literature prepared by Dr. Honey. This indicated that the Kinsmen Club was interested in the Dental Health of the child and the literature gave directions as to how dental illness might be avoided and also told the parents where they could attend the Child Health Conference to get information which was being given by the supervisor of the Division and also the date when he would be there. This has resulted in a remarkably good attendance of these young mothers with their children at the Child Health Conferences.

This part of the program was concerned not only with the actual examination of the children's teeth, but as well instruction as to diet, and the elimination if possible, of any and all factors that might be contributing to poor dental health. No effort was made to apply any preventive measures such as the use of anti-decay materials, but rather to prove or dis-

TABLE I

URBAN CROWLAND

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Memorial	1947	440	26	21	1927	4.3	644
"	1948	496	62	30	1748	3.5	1245

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	393	38	57	50	68	38	39	31	21	19	11	8	4	4	1	3	1							
1948	404	48	69	55	72	49	43	21	17	10	5	5	5	3	1	1								

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Mathews	1947	262	20	10	1108	4.2	301
"	1948	302	29	7	1113	3.6	629

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	232	30	28	34	33	20	29	17	12	12	8	4	2	1	1		1							
1948	266	38	48	35	33	29	38	14	18	5	6	2												

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Maple Leaf	1947	270	23	34	926	3.4	557
"	1948	254	47	20	713	2.8	826

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	12	11	13	14	15	16	17	18	19	20	21	24	30
1947	213	28	44	32	23	24	16	10	14	6	12	1	2			1								
1948	187	42	37	24	18	23	13	8	12	3	2	2	1	1	1									

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Welland South	1947	147	7	9	637	4.3	210
"	1948	154	17	18	479	3.1	326

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	131	20	11	13	27	16	10	8	14	4	2		4					1		1				
1948	119	20	24	13	22	9	10	6	7	2	3	3												

TABLE 2

WAINFLEET TOWNSHIP

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
"	1947	471	51	—	1825	3.8	496
	1948	508	79	47	1512	2.8	887

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	420	58	67	63	66	54	26	27	19	15	11	5	7	1			1							
1948	382	59	77	63	57	29	33	23	18	7	9	4	2	1										

THOROLD TOWN

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Prince of Wales	1947	223	8	3	1147	5.1	319
"	1948	230	21	14	806	3.5	663

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	212	12	29	16	32	41	19	8	20	12	9	6	5	2			1							
1948	195	36	36	23	23	21	15	17	7	9	5		2			1								

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
L. G. Lorriman	1947	197	14	9	949	4.8	212
"	1948	226	32	15	804	3.6	425

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	174	12	19	14	31	24	17	15	13	14	5	3	4		1	1	1							
1948	179	26	33	22	22	13	15	20	7	12	5	3					1							

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Thorold High	1947	210	8	12	1032	4.9	1035
"	1948	227	17	18	889	3.9	1730

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	190	18	19	18	32	22	18	21	15	8	6	2	2	1	2	6								
1948	192	40	31	20	26	12	15	13	12	5	5	4	2	2		1	1	1		1				1

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Holy Rosary	1947	286	10	4	1625	5.6	209
"	1948	296	28	16	1265	4.3	347

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	272	13	17	22	44	40	26	29	29	8	14	6	7	4	3	2			1		1			
1948	252	24	20	39	39	32	22	30	19	10	8	4	5											

TABLE 3

WELLAND CITY

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Queen	1947	233	24	8	846	3.6	619
"	1948	215	51	18	544	2.5	967

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	201	32	38	29	35	15	11	14	10	6	2	4	1	2		1						1		
1948	146	31	28	22	27	8	8	7	5	4	3	1			1	1								

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Ross	1947	279	37	24	851	3.5	871
"	1948	329	94	28	824	2.5	1446

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	218	29	44	41	39	20	15	5	11	8	1	2	1	2										
1948	207	44	37	24	30	17	23	7	8	6	6		2	2	1									

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Central	1947	355	25	35	1110	3.1	1004
"	1948	447	69	36	1354	3.0	1850

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	295	63	58	52	34	26	15	14	14	5	6	3	2	1			1		1					
1948	342	57	68	53	48	28	30	25	13	8	4	2	3	2		1								

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
First St.	1947	416	20	19	1752	4.2	754
"	1948	425	56	25	1536	3.6	1284

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	377	47	61	50	51	45	29	27	27	14	11	5	6	2				1		1				
1948	344	53	59	44	43	31	35	21	29	8	9	5	4		2								1	

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Empire	1947	226	15	10	881	3.9	494
"	1948	281	46	51	891	3.1	1083

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	201	34	29	28	33	14	16	13	14	9	6	1	2		2									
1948	184	41	40	31	32	12	15	15	7	9	6	1	5	2										

School	Year	Number of Pupils	No Defects	Defects Other Than Cavities	Number of Cavities	Average Cavities	Number of Fillings
Coronation	1947	272	10	14	1375	5.0	476
"	1948	248	12	9	1344	5.4	510

	Pupils With Cavities	Cavities Per Pupil: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	30
1947	248	20	30	29	37	27	17	24	27	8	7	5	5	3	3	1	2	1	1	1				
1948	227	14	21	30	23	22	32	21	18	13	8	13	3	4	1	1	1			1		1		

It will be noticed that the best over all record has been obtained in Wainfleet Township, a rural area. In the thirteen schools in this area the teachers have been most enthusiastic and active in ensuring the pupils receive dental attention.

The worst picture prevails in Coronation School where the parents have not a Home and School organization and furthermore do not believe in the necessity of maintaining the deciduous teeth in a healthy state.

prove the theory that the problem of poor dental conditions might be alleviated by education. This premise was based on the fact that at one time tuberculosis was wide spread to such an extent that it was known as the "white plague," and as such it caused as many deaths and as much suffering in the population as any of the recent wars in the same period of time. This disease had been brought under control to a great extent purely because of educational methods, and better treatment. No vaccine or other preventive measure had been at that time used extensively in our country to control the disease.

To augment the program the Red Cross furnished a nutritionist who spent half of her time in the Health Unit area giving instructions to all ages in the field of nutrition. Now what can we say about results of the program? The above tables should illustrate to anyone's satisfaction what has been accomplished purely through the program to date.

Tables 1, 2 and 3 give a comparison of the findings on the last two years' examinations. They represent a cross-section of the area covered by the Dental Public Health Program and also different types of population of school age, namely Welland (Urban), Crowland (Suburban), Thorold (a town of 6,000) and Wainfleet Township (Rural).

In addition there are representative groups from Public Schools (Welland, Crowland, Wainfleet and Thorold) High School (Thorold), Separate (Thorold) and Bilingual (Welland Coronation).

We feel that these figures can be improved, but eventually we will reach the stage where no improvement will be apparent because of the fact that there is still a certain part of the population who regardless of any program do not pay proper attention to the matter of better dental health. What this figure will be of course depends on the economic state of the public. Up to date we have been fortunate in this respect in that our people in the area in which we work have enjoyed a remarkably high income. However, it should be pointed out that this is not necessarily one of the major factors, because results from the different schools would indicate that it doesn't always follow that people who enjoy higher than average income have children with the best teeth. You will probably feel that the program as presently constituted may have some deficiencies. We agree that such is the case Therefore, it seems desirable at this time to outline what we have in mind for the future. In the province we have been assured by the Minister of Health Honorable R. T. Kelley that a dental program such as is being carried out will be continued making use of the Federal grants for improvements of Public Health services. We feel that this will necessitate the addition or the continuance

of a nutritionist in the field. Another fact that is important is that it does not necessarily follow that the examinations should be continued as they are now year after year. In the medical field we have given up many years ago examining children year after year. Once a certain stage is reached then there does not seem to be any point in re-examination. For parents who are taking care of their children's teeth by regular visits to the dentist and also seeing that they have the proper diet, it does not seem necessary that we remind them of the fact year after year. That does not mean, however, that certain individuals will not be examined yearly. Some of these children will have to be examined if we are ever going to get the dental work carried out. Then of course there is the matter of available time. With a population of about 40,000, Dr. Honey has reached the stage where it would not be possible for him to examine many more children as effectively and carry out the educational program as we feel it should be. My own personal opinion is that it will be necessary to recruit other personnel. Probably the dental hygienist will be the answer, because it should be apparent that the dentist as a highly trained individual should not necessarily spend all of his time on examinations. There are certain administrative procedures that must be carried out. There is also the advantage of the trained professional person being engaged more intensively in the educational program. At the same time we have to appreciate that in the Medical field public health nurses are widely employed. It might be possible to educate the public health nurses to do better examinations from the dental standpoint. However, it seems to me that we do need some one other than a dentist who will work in conjunction with our nurses and will have greater knowledge about the full field of dentistry than can be expected on the part of the public health nurse. There should be no difficulty about this fact because we in the Medical field use auxiliary personnel. For instance in the Health Unit we have a veterinarian in charge of food control, and I can assure you that under his direction food control in our Health Unit area is being carried out much better than it would be by medical personnel or a sanitarian. I have also mentioned the nutritionist. The nutritionist while primarily engaged in augmenting and complementing the dental program does not restrict her activities to matters pertaining only to the teeth, but rather covers the whole field of nutrition. It would seem therefore, that a dentist with a group of hygienists could serve a much larger area of population than is the case at present and this probably is a desirable situation to develop. The dentist of course, would confine his or her activities then to special problems as does the Medical Officer of Health at the moment using auxiliary personnel to complement the program.

You should not form the opinion that this is the whole answer, despite the fact that we have worked intensively on the subject for three years, there are some angles that have developed. Probably we did not think of them in the beginning but rather I think it is because we have obtained a larger concept of the whole program. I want to refer to two things now, at least which I feel are of the utmost importance.

Research

The first of these is the matter of research. I feel that the dental profession must spend more time into finding out the cause of dental decay. You all are aware of the articles which are appearing in the press about this problem. I do not want to infer that this is new, but I think there has been a definite accentuation of public interest in the whole problem of dental decay. This undoubtedly has been stimulated by lay personnel, but it seems to me that the profession must show the way through either establishing certain facts to be true or not. I do not need to mention any more than two chemicals about which we are all hearing

these days. One is the use of sodium fluoride either in the drinking water or as a topical application and the other is the use of dibasic ammonium phosphate salts in a tooth dentifrice. I do not think that you as a profession can ignore this. You have to take the lead and say that these two articles are useful or useless. I am not in a position to decide that and the public in general are in a much worse position. I feel that probably the only place where the value of sodium fluoride can be determined or any other article is probably in our own area. We have now had the educational program going on long enough to determine how much can be achieved by education and how much can be achieved if sodium fluoride was either used in the water supply or as an application to the children's teeth. The same could be said for any other article. In time there will be other areas in our own province and undoubtedly in other provinces where research can be carried out in a practical manner using controlled experiments. Only a controlled experiment is going to give us the answer.

The second matter that I will want to draw to your attention is the matter of treatment. It may have been gathered that our program is all inclusive and treatment is of a secondary nature. Nothing is further from the truth. As I have pointed out the dentists in our Health Unit area now see five, six or seven children a day on the average. That is important. You as dentists have either to have your general practitioners trained in the better handling of children's dentistry or more redodontists are necessary. I think the former is more important and I am quite convinced that that is the right answer. While the medical profession has a great many rediatricians these days the general practitioner is doing much better children's work. That has resulted because of the rediatricians not in spite of them. Certainly there is no lack of ability on the part of the dentist to practise good children's dentistry. Of this fact I am convinced through my observations. Secondly the practising dentists tell me that after a certain period of time they have less and less difficulty handling children. This situation will undoubtedly improve, because as more children go to the dentists then they learn it is not such a horrible experience and after all education from person to person in the laity is the best form of education of which I know.

In addition I feel it is more important that the practising dentist in some manner, either through a prepaid form of dental care plan make dentistry available for the total population. This may entail the establishment through and in hospitals of larger dental treatment facilities, or it may entail preferably work done in the dentist's office. All of this of course means that more dentists will have to be available.

The alternative is that you will have thrust upon you some form of state dentistry or socialized dentistry as is now happening in Great Britain. By the same token, you may find yourselves in the position that your confrères in the British Isles find themselves in, namely that the state will say that each dentist can only do so much work and will only be paid a certain amount for the work he does. I do not think that this will solve the problem. I feel that any tendency in this direction can be avoided if the profession make up their minds that they are going to give an adequate substitute. The public looks to your profession for guidance. If you don't furnish it then they are going to inflict their ideas on you as a profession, and what is more important you may not like it. If such should happen, I would say that probably you only have yourselves to call to account for the state in which you find yourselves.

Conclusions

What then are the conclusions that we should draw? To summarize we can say probably the following facts are self-evident:

1. That there has been a definite change in the socio-economic state of our population.

2. That as a result of the last two wars, large numbers of our population have had the advantage of adequate dentistry and therefore as civilians today expect this state to continue.

3. That the dental profession must meet the situation themselves if they are to avoid having some other form which might not be desirable thrust on them.

4. In any program we should start with a good Dental Public Health program aimed at prevention and in this regard we have outlined one that we feel has been reasonably successful in the Welland and District Health Unit, bearing in mind that this is only in the preliminary stages.

5. That this is an educational program pure and simple aimed at educating the public, the profession, and also auxiliary health personnel working in the preventive medicine field.

6. That research is an essential if any plan or plans are going to function so that the cause of the great amount of dental decay can be determined accurately and adequate preventive measures established. The profession must give leadership to the public stating whether or not any publicized methods are useful or useless.

7. That some provision must be made to furnish dental treatment to indigent clients so that these people are not only getting treatment of terminal conditions.

8. That the local dental profession have co-operated to the fullest in the program and to do so have changed their methods of practice to take care of five or six times the number of children.

9. Teachers, members of Home and School organizations, Boards of Education and others are interested, and without their interest any program will not be successful.

ANNOUNCEMENT

HIGHLIGHTS

of the

JOINT CONVENTION

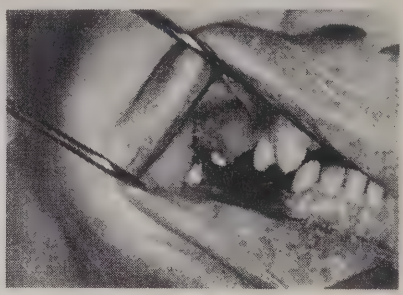
- **NATIONAL MEETING.**
- **CLINICAL HOMECOMING. VISIT TO THE FACULTY OF DENTISTRY.**
- **CELEBRATING THE 75th ANNIVERSARY OF THE FOUNDING OF DENTAL EDUCATION IN CANADA.**
- **CONVENTION THEME — PREVENTION and CONSERVATION.**

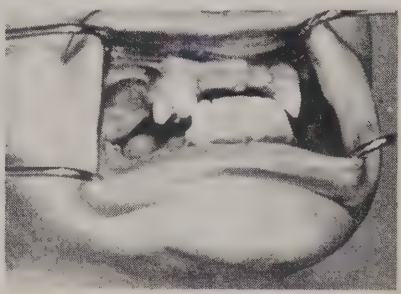
ALVEOLECTOMY TO CREATE SPACE FOR DENTURES

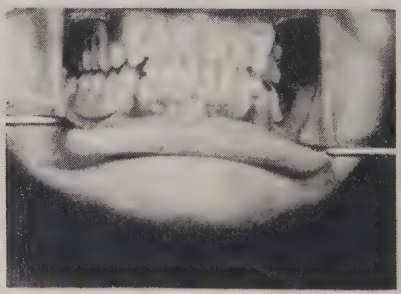
by DR. WILLIAM W. BRESLIN, Toronto, Ontario

THE loss of teeth whether in adult or child life has a tendency to cause drifting and exfoliation. A serious restorative problem is therefore presented to the dentist, where both the mandible and maxilla undergo change in their relationships to each other. This change may be evident in parts of the jaws where there is a normal occlusion of some teeth, and yet an abnormal occlusal relation of teeth to edentulous areas. A typical example of the surgical correction of such a case is presented below.

Mr. H. P. F., age 27, discharged







from Armed Forces, presented himself at this office March 30, 1946 for consultation and treatment regarding his mouth.

CLINICAL EXAMINATION: Patient was wearing a partial upper denture replacing the anterior teeth. In the right lower posterior region, the teeth were destroyed by caries to such an extent that the crowns were almost even with the gingival margins (figure 1). In the right upper posterior region a similar condition existed except that a marked exfoliation was evident, so that when the mouth was in occlusion the upper and the lower gingivae were practically in contact.

RADIOGRAPHIC EXAMINATIONS: Full mouth radiographs revealed extensive destruction of the crowns through caries, particularly on the right side. There was also involvement of the alveolar structure supporting several broken roots.

SURGICAL TREATMENT:

1. Under mandibular anaesthesia the right lower mucoperiosteum was deflected from the buccal and lingual of the teeth and alveolar process.
2. With an elevator the roots and teeth were removed.
3. The buccal and lingual plates of bone were removed with a heavy rongeur for a distance equal to the length of the crown of the cuspid.
4. The interproximal edges were filed and smoothed down.
5. The sockets were curetted and all loose pieces of bone removed.
6. The soft tissues were replaced and overlapping edges were removed with straight scissors.
7. Wound was then closed with continuous dermal sutures (figure 2).
8. Tuberosity and infra-orbital injections were made for anaesthesia of right upper maxilla.
9. Similar procedures were followed as in the lower, except that more process was removed to compensate for the exfoliation.
10. When enough room had been created for the upper and lower dentures, this area was closed with continuous sutures (figures 3).

CONCLUSION: Patient was given capsules of amidopyrin, phenacitin and aspirin to control pain. On April 1 he reported there had been no discomfort, and no loss of time from his work. The sutures were removed on April 5, and by June 10, 1946 the mouth was considered sufficiently healed for denture construction (figure 4). The final result, indicating the correction of the original complaint, was evident when the dentures were placed in the mouth. (figure 5).

206 Bloor Street West

ANNOUNCEMENTS

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The Forum

HEALTH LEGISLATION
Where Are We Going?*

by EDWARD H. O'CONNOR, Executive Director of the Insurance Society of America.

Condensed from Illinois D. Jour., July 1949

Between the great things we cannot do and the small things we will not do, the danger is that we shall do nothing.

On that premise I appear before you today in a sincere effort to arouse you to action, to urge you to recognize and understand the problem of progressive socialism which, if permitted to continue unabated, will eventually destroy our voluntary society and our free market economy.

Whether you realize it or not we are fast approaching socialization by taxation. We are just ten years behind England on the schedule planned by the designers of confusion who are bent on destroying the competition of private ownership. We have all been very smug and complacent. We have taken our freedom for granted. We have washed our hands of so-called "dirty politics." We have buried our heads in the sand while a small minority in our midst have been steadily undermining the foundations of our freedom for half a century. We have reached the point where the American people must make their choice whether they are to surrender to the State or to continue living as free men in the tradition of incentives and rewards which dates from the nation's beginnings.

Such I believe is the great issue of our time; an issue that can be met if courageous men and women will now uphold private enterprise against collectivism in Federal, State, and local governments. Let us restore the American incentives to work, to "have and to hold"—the old rewards for producing more and better goods. Let us put a stop to the government's use of the money of taxpayers to compete against them—yes and above all—stop politicians buying votes with "Federal Aid" for such measures as governmental protection from the cradle to grave and socialized medicine.

Whenever men have endeavoured to transfer their responsibilities to the shoulders of other fallible men calling themselves government, they have eventually reared a Frankenstein monster that has turned and devoured their political, intellectual and spiritual liberty. This earth was never intended to be a full and complete Utopia. The good Lord just didn't plan it that way. Didn't He say "Thou shalt earn thy bread by the sweat of thy brow"? As we look back in our own history we recognize that struggle makes strength and no person's security can exceed his individual self-reliance.

Neither the insurance industry, the medical profession or business in general have been sufficiently alert to the dangers of comprehensive national social insurance. The legislative and administrative history of social insurance throughout the world shows clearly that it is impossible to accept one part of social insurance without ultimately falling prey to the whole scheme; that social insurance insi

*Presented at the Annual Meeting of the Illinois State Dental Society, Peoria, May, 1949.

diously pervades the entire body politic like a cancer, and that benefits bestowed as social insurance rights are purchased by surrendering human rights. In other countries legislation for national social insurance has always meant subjugation of the individual to the Government.

Unfortunately, at the present time, there are many persons—sound citizens, trusted members of the community—who believe that a "little inflation" is good for the country. But the question arises whether one can take a "little social security" without desiring larger amounts. The trouble with social security is that small doses develop an insatiable craving for larger doses. No social security program, however undesirable, has failed to expand, and in its expansion it penetrates the entire economy ever more deeply. The triple curse of social security is the spiral of political promises, the weight of bureaucratic control, and the crushing burden of taxation.

I believe I can make the statement, without fear of contradiction, that a large segment of our people have been fast asleep and completely unaware of the octopus-like movement of government compulsory insurance both at the state and federal levels. We bury our heads in our daily tasks and leave our tail feathers exposed to the skirting gales of political controversy. We all have a great deal at stake in the movement to expand our social security act. Not only should our interests be motivated with the desire to keep and maintain our business free of further governmental interference, but greater than that we must be ever alert to preserve the principles of our competitive voluntary enterprise system which the so-called "intellectual" in his supreme conceit would destroy.

It will be argued that the majority of workers are not able to pay for doctors when they are sick and that, consequently, they will be out of work longer than will be necessary and will be drawing sickness benefits. It will be argued that many persons who will leave the labour market on the ground that they are permanently disabled and will, therefore, draw cash benefits as long as they live, might be restored to a certain degree of earning capacity if only the Government would provide the medical care they need. If that unhappy day ever arrives, a goodly proportion of the physicians of this country will devote their entire time, not to improving the health of the people, nor caring for the sick, but simply carrying out the social insurance task of certifying patients for cash benefits during sickness and permanent disability.

The adoption of a national system of sickness insurance would involve the extension of federal control into the lives of nearly every American in a measure unprecedented in the history of the nation. It would extract taxes from every pocketbook, and of necessity swell the proposed health, education, and security department into one of the biggest and most powerful government departments the country has ever known. In short it would be straight State Socialism with ultimate power over all the people vested in the Federal Government.

I will read a statement made last year at Bogota, Colombia, by a member of our State Department, Dr. Charles G. Fenwick, who registered a strong protest against the principle which had been proposed in the form of an Inter-American Charter of Social Guarantees. He said: "What is needed today is a clarification of the objectives which we have in view in legislating for the protection of the workers. The tendency of the present day is to make man a mere cog in the great machine of the state. In order to obtain security he must surrender liberty. In order to get protection against the industrial machine, which destroys his human personality, the worker must have recourse to the state; and the state then tends to become his master, substituting one form of slavery for

another. I would wish that the Charter might reaffirm the ideal of a free man, working under free conditions, paid a just wage which would enable him to support his family and to own his own home under conditions of dignity and security. The liberty of the individual is being lost in the huge size of labour unions, in the dictatorship of industrial combinations, and in the all-comprehensive legislative authority of the state. Our problem it seems to me, is to formulate a philosophy of social relations, to show the world how the security of the worker can be obtained without loss of his liberty."

DIET NUTRITION AND DENTAL CARIES

by CARL L. SEBELIUS, D.D.S., M.P.H., Nashville, Tennessee

Summary of paper in Jour. of D. for Children 3rd Quarter, 1949

1. Dental caries is a disease of the calcified tissues of the teeth caused by acids resulting from the action of micro-organisms on carbohydrates. The process is most complex because of the many variables involved.

2. Commercial propaganda should be critically studied before being followed.

3. Calcium withdrawal has not been demonstrated after the teeth have formed.

4. Nutritional status does not seem to have a significant bearing on the caries process.

5. It has been demonstrated that vitamin D is of value in the formation of the hard dental structures including the teeth themselves, while the existing intakes of vitamins A, B and C within the United States probably have no significant effect upon the development of teeth in man.

6. The ingestion of calcium and phosphorus in amounts sufficient to prevent skeletal defects will be adequate for the formation of teeth with normal composition and structure in the average well child; however, it is true that calcium and phosphorus metabolism is far from being completely understood at this time.

7. Fluorine no doubt shows the most promise as a means whereby the ingestion of an element during tooth development may serve in turn as a partial protection against the caries process.

8. The restriction of sugar, either refined or natural, is effective in the control of dental caries.

9. A person susceptible to dental caries who ingests refined sugars throughout the day will have more caries than the sporadic eater if the other variables are the same.

10. Children should eat a protective diet to promote normal growth and development, not to prevent dental caries. The sugars should be kept low to help control dental caries.

ANNOUNCEMENTS

Class Reunions

Be prepared—Complete arrangements as soon as possible.

Silver Anniversary — Class 2T5

Class members please note that arrangements are being made to celebrate the silver anniversary of graduation, at a dinner to be held during the National Convention, May 14-17, 1950, in Toronto.

Please reply to the Class President's letter promptly and direct all enquiries to Secretary, Dr. L. M. Grose, 663 Greenwood Ave., Toronto, Ontario.

L. M. GROSE, Secretary.

National Health Week

The sixth annual National Health Week is scheduled for January 29 to February 4.

THE DENTIST AND THE CHILD PATIENT

by WALTER T. McFALL, D.D.S., F.I.C.D., Asheville, North Carolina

Condensed from Jour. of Ohio State D. Assoc., Aug., 1949.

More and more the dentist is being called upon to give adequate and scientifically approved professional services for the child patient. Dentistry as a profession is "more on the spot" during these hectic so-called good times, than ever before in our history. The public and the parents will tolerate some tall tales and unacceptable excuses when dental appointments concern adults, but when a child is suffering or needs dental care—real professional services are rightfully expected and demanded. We have taught the public that our best services are preventive services. The public is taking us at our own word for where better can our preventive services start than in the mouths of little children?

On the U.S. Post Office in Washington one may read "Carry Truth and Life to all Men." Surely this is something of the aspiration and inherent feeling you had as you graduated, successfully passed your State Board of Dental Examiners and actually began to place meaning into your well-deserved and hard-won degree of Doctor of Dental Surgery. Do you still feel as you did when you graduated? Why not? Have you changed, or your ideals or what?

Yes, we are living in an age of prevention. In dentistry it is not easily defined. We treat adults, youth and little children. Preventive dentistry is not the same in all groups. We use all means to preserve the oral cavity in a state of health; to increase dental and general health efficiency.

Somehow, somewhere in the realm of the disproved, better-to-be forgotten dogmatic past, the current idea among dentists has been that operative procedures for the child patient are always attended with much of disappointing effort and resultant discomfort to both the dentist and child. This is no more scientifically true today than is the theory that emetine will positively cure pyorrhea. Twenty-five years ago we guessed, we hoped, but the average dentist did not know much about children because he worked for very few during his undergraduate days and often only those he was forced to work for afterwards.

One does not have to be a wizard, a clown, or an unusual dentist to serve children successfully and satisfactorily. The average dentist is more afraid of a child than is the child of a dentist. Why? One reason is because the average dentist has neither studied nor tried to understand the child nor has the dentist adequately prepared himself or equipped his reception room and dental office to serve and attract children. Any fundamental approach to a child's behaviour or reactions to given situations necessitates a working-basis agreement of certain concepts. Nothing is constant but change; often the dentist is the one who must change.

Generally behaviour is *purposive;* that is, one strives so to orient himself towards environment and circumstances as to produce a maximum of well-being and pleasure, a minimum of pain or unhappiness. True, much of this action appears as unconscious effort yet if carefully examined we shall find from a practical standpoint that the motivation behind behaviour is largely *emotional.* Yes, one learns quite early that *feeling* precedes *knowing* and continues largely to dominate an individual's behaviour. Daily we may prove that intellect and reason play us funny tricks in our investments, marriage, friends and even our occupations. A child's life is an ever-increasing succession of reactions to situations which, as he truly *feels* them, represent ways of avoiding pain or winning pleasure and satisfaction.

"You can lead the horse to water but you cannot make him drink." Yes, we can teach children, but they must do

the learning themselves. Too often parents, teachers and dentists resort to "reason" appeals, threats and punishment—and in spite of all adult intelligence, experience and rationalization, children often do feel within themselves that they wish to do what they should. Are children afraid of you as a dentist? If so, why are they afraid? Fear is an emotional response in children and they are not easily reasoned with nor do words, rewards and promises change their innermost feelings and desires. Lack of confidence is closely allied to fear so the dentist must never lie to children or parents if he would succeed in winning their confidence. Dentists can never expect to hold the confidence of children until they merit the respect of the parents. Too often dentists have found fault with parents' prejudices and children's attitudes without ever taking inventory of why folks, and especially children, do not like the dentist.

What is a child? "A person who is going to carry on what you have started. He is going to sit where you are sitting and attend to the things you think so important. He is going to move in and take over your churches, s c h o o l s, universities, corporations, councils and prisons. The future and destiny of humanity are in his little hands, so it might be well to pay him a little attention now." I said a moment ago the dentist needs to examine himself. Olson furnishes some actual and practical help for the dentist who wants to do his part and be his best.

ILLINOIS PREVENTION PROGRAM

by JOHN E. CHRIETZBERG, D.D.S., M.P.H.

Summary of paper in Illinois D. Jour., Sept. 1949

There is sufficient evidence to show that the dental profession would continue to be a profession with higher skill and ability if dental caries should be eliminated by a magic wave of the wand. The application of preventive measures and the expansion into other fields of dentistry would cause the public to have better dental care. Dental diseases and abnormalities that have been neglected in the past would become important factors in the revolutionized dental profession.

Sodium fluoride applied topically and the elimination of carbohydrates or free sugar from the diet are the only dental caries preventive measures that have been accepted as safe and effective dental caries control measures. Both have their limitations and objectionable features which require excellent cooperation on the part of the patient and the profession to obtain maximum benefits. Adhering to the recommended technique of topically applying sodium fluoride is important if we expect to obtain the results that have been publicized extensively. No preventive measure will be 100 per cent effective until the patients can receive the treatment almost as easily as they can receive a breath of air.

Two other preventive factors have been mentioned which have great potential value namely sodium fluoride in the drinking water and dibasic ammonium phosphate and urea in the dentifrice. Both are in the experimental stage which will require some time to determine their value as a public health measure for large groups.

Every noble acquisition is attended with its risks: he who fears to encounter the one must not expect to obtain the other.

—*Metastasio*

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Editorial

THE DENTAL ASSISTANT

Every dentist requires one dental assistant and in many instances two could very well be employed. The dental assistant has worked herself into the very warp and woof of the practice of dentistry and the conduct of our practice would be quite inefficient without her. This being the case is it not time that we dentists gave more thought to her status, to her training, to her accomplishments and also to her title?

Speaking of title you have noticed repeatedly in the news section of this journal the heading "Dental Nurses' and Assistants' Association"—Why this distinction? When a registered medical nurse becomes a dental assistant her previous training may help her, in some regards, to pick up quickly her new duties but not necessarily so. Most of her duties are entirely new and she may not acquire the proficiency in her sphere of activity as quickly as a business trained girl nor may she ever reach the pinnacle reached by the girl trained in business methods, so to carry the name "nurse" into her new environment is open to the most serious question.

It is not so many years ago that in some of our provinces, at least, a man could study dentistry by being indentured in a dental office and after a certain length of time try the provincial board and become a full fledged dentist having never attended any dental school. However once he received his license he was admitted as an equal in all dental societies. At present we have men who were graduated in dentistry and then have taken a few extra years of study to qualify as a specialist. However we do not call our national association the Canadian Dental and Orthodontic Association. All dentists regardless of their scholarship are looked upon as dentists so why

should a distinction be drawn among our dental assistants? Should not the name of their societies be changed to read "Dental Assistants' Association or Society"?

Then we have a third group who have spent one term in a college. They have not necessarily received the business training obtained by the girls who have been graduated from a business college. They have much to learn over again when entering a well established dental office. They may or may not be as capable as many of the girls who have never taken such a course. We expect these girls to take an active part in the dental assistants' association, to learn what they can from such contacts and give what help they can to the other girls of their fraternity? No doubt they all do. All of this does not mean that we belittle the medical nurses' course or the dental assistants' course. Any training of this kind is helpful and most worth-while.

This whole problem was brought forcibly to my attention recently in a letter from Dr. Reyburn R. McIntyre of Calgary who has been giving some study to these matters. He states: "I realize, to some degree, the difficulty in forming a harmonious arrangement, when we have in dental offices assistants who possess an R.N. diploma, others who have a diploma for one year's training in a dental school; and again others who are extraordinarily efficient and desirable in dental offices, and yet have neither. I do not think we can support three groups."

With these sentiments this writer thoroughly agrees. We should have but one group—"The Canadian Dental Assistants' Association" or certain provincial and local assistants' associations or societies.

Before long we will have dental hygienists or dental nurses specially trained to give prophylaxis, teach dental health and other duties outside the realm of the dental assistant and they on account of the nature of their work will no doubt have an organization of their own but the work of dental assistants is all the same whether they have an R.N. diploma, whether they have graduated from a dental school equipped to give such training, whether they hold an arts or Ph.D. degree or whether they have business college training or no special training along these lines. But if a young lady has been chosen by some dentist on account of her gracious manner, charm, personality and ability to become his assistant she should not be relegated to any inferior position by her associates at any time or in any place and I for one would like to see the Canadian Dental Association go on record as approving of these principles.

Dr. McIntyre raises another vital question in his letter and this time it is the members of the dental profession who are at fault. He states: "It seems a strange circumstance, that in a place like Calgary, for example, a limited number of these girls in dental offices, put in hours after duty, in an endeavour to raise funds etc. for the advancement of dental assistants' organizations, that whole-heartedly support organized dentistry, and we dentists throughout Canada, sit back and accept this charity from year to year. The least we could do would be as a licentiate of a province, contrib-

ute an amount equal to what these people raise, or better still grant from our own personal income, the desired amount, since we are the ones who chiefly benefit, when these people are enthusiastically working on our behalf. I have often wondered how long this situation is going to continue and what we are going to do about it." How true this is! We allow these efficient and loyal assistants of ours to make any sacrifice on our behalf and give little recognition for their efforts. When Mrs. Marion Edwards, President of the Canadian Association travels from coast to coast, at her own expense, in order to build up an efficient and helpful assistants' association surely some recognition is coming to her for her sacrifice in our interests.

However we can and should do more than give financial assistance to these young ladies. We should plan for evening courses in various centres so that their progress would be more pleasant, more rapid, and when the final examination is passed a diploma should be granted. But with or without a diploma they are still dental assistants and should be designated as such.

This plan of evening courses is being adopted in a number of centres in the U.S.A. and is working out exceptionally well.

Henry Clay said "The world is self-taught in a thousand cases where it is college bred in one." So I say to every dental assistant, whatever your previous training, aim high and so bring glory to your chosen profession for as Beethoven stated—"The barriers are not yet erected which shall say to aspiring talent, 'Thus far and no farther.' "

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

1. Colonel E. M. Wansbrough, OBE, MM, ED, Director General Dental Services, was one of Canada's representatives at The XIIth International Congress of Military Medicine and Pharmacy, held at Mexico City from 23rd to 29th of October.

2. Dr. John C. Brick of Windsor, Ont. has been appointed to the Corps in the rank of Captain. Captain Brick was born and brought up in Windsor, Ont. He enlisted in The Essex Scottish, NPAM, as a Private in 1936, was promoted Sergeant in 1938 and commissioned as Second Lieutenant in 1939. He transferred to the Canadian Army Active in May 1940 as Regimental Signals Officer of The Essex Scottish, and proceeded overseas in July 1940. Captain Brick was taken prisoner-of-war at Dieppe in 1942, liberated in May 1945, returned to Canada two months later, and was retired in August of that year with the rank of Captain. He studied dentistry at the University of Toronto, graduating in June of this year.

3. Headquarters No. 11 Dental Coy, Canadian Army Active Force, has been moved from Calgary, Alta. to HQ Western Command, Edmonton, Alta.

ANNOUNCEMENT

NATIONAL CONVENTION

of the CANADIAN DENTAL ASSOCIATION

in cooperation with the ONTARIO DENTAL ASSOCIATION

(83rd Annual Meeting)

ROYAL YORK HOTEL, TORONTO • MAY 14, 15, 16, 17, 1950

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

Tax Deduction Disallowed for Salaried Members

Statement was made by the Minister of Finance in the House of Commons on September 27 last to the effect that the Income War Tax Act was amended in 1948 so that wages and salaries were net income for taxation purposes. Section 6, sub-section (6) in the amended Act reads as follows:

> "In computing the income from an office or employment, no amount is deductible for a disbursement or expense laid out for the purpose of earning the income: . . . . . "

This point was not clearly stated in the previous Act. The department ruled that salary was net income for taxation purposes but several appeals were made to the Exchequer Court and in each case the Court interpreted the Act to mean that money laid out for the purpose of earning a living (e.g. licence fee) was an allowable deduction.

In 1947 the Canadian Dental Association, after repeated attempts, obtained a ruling from the Minister granting the deduction of the licence fee as an allowable deduction for income tax purposes. It is now apparent that this ruling was altered by the amendment to the Income War Tax Act of 1948.

Consequently the annual licence fee is a deductible item for 1947, but *not* allowable for 1948 and subsequent years. Members on salary, who deducted the annual licence fee, on their 1948 returns are now receiving notice to pay the tax on the amount of the fee.

The Association has felt that it was distinctly unfair not to allow salaried members this deduction. The annual fee is a compulsory one and a justifiable expense. The fee is an allowable expense to the member in private practice. The principle involved appears unfair.

From time to time the authorities have advised us that if the fee were paid by the employer the difficulty would be overcome. We have pointed out that the governments are the chief employers of our members and the governments refuse to pay the fee.

According to our information difficulty has risen in respect to the item, in that many groups have applied for similar deduction. These groups include labour organizations whose fees are, generally speaking, much higher than those of our members.

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Extravagant Claims for Dentifrices

Advertising claims made by the distributors of ammonium-ion dentifrices have been examined by Canadian Government officials. As a result a circular letter has been prepared and circulated by the Food and Drug Division of the Department of National Health and Welfare to those engaged in the production and distribution of these dentifrices. The letter is dated September 29, 1949, and the content reads as follows:

"*Dentifrice Advertising*

> The prominence given recently to experiments being conducted on the use of the ammonium-ion, its effect on lactobacillus acidophilus, and its possible effect on the incidence of dental caries has led to an accelerated advertising of dentifrices in general. Much of the advertising has been spectacular, and, we believe, much has been unduly optimistic if not flagrantly misleading.
>
> Dental authorities have stated repeatedly that, at the present time, it is not possible to assess the value of the ammonium-ion in reducing the incidence of dental caries. The association of high lactobacillus acidophilus counts with high incidence of dental caries would make it logical to assume that any agent reducing the former would be likely also to reduce the latter. However logical the assumption, it is necessary that it be established by definite clinical trial before it can be accepted as fact. Dental authorities estimate that at least two years will be required to compile sufficient data to evaluate such claims.
>
> The principal function of dentifrices is to clean. In addition, the ammonium ion, when present in the mouth in sufficient concentration and for sufficient time, seems to effect a decrease in the lactobacillus acidophilus count. It does

not follow that a dentifrice that will do either or both of these things will prevent dental caries or that it will reduce significantly the incidence of new caries. Other factors, such as diet, will influence the results.

In view of the above, for the present the department considers to be misleading any assurance that ANY dentifrice, with or without the ammonium-ion, will or will help to

(a) stop or prevent tooth decay;
(b) have any effect on existing tooth decay;
(c) reduce the incidence of caries.

Claims for the ammonium-ion should be limited to its effect on lactobacillus acidophilus, and then only if actual demonstrable results have justified the claims for the particular finished product as advertised."

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Industrial Dentistry

A pamphlet entitled "Industrial Dental Services" has been published by the Association. The subject matter of this pamphlet was prepared by The Committee on Industrial Dentistry.

Single copies may be obtained by writing The Secretary, Canadian Dental Association, 211 Huron St., Toronto.

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1952 Annual Meeting

Invitations for the holding of the 1952 Annual Meeting in Vancouver have been received from both The British Columbia Dental Association and The Council of the College of Dental Surgeons of British Columbia. The C.D.A. Board of Governors has agreed to accept the invitations and the 1952 Meeting will be held in Vancouver.

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Statement re Dentistry in Great Britain

The following concise statement respecting the position of dentistry in Britain has been prepared by Mr. A. E. Rowlett who is well-known on this continent. The statement is significant in that the underlying factors are presented which are not well understood in Canada. These facts give a better understanding of recent happenings in the development of the British National Health Service. Some readers may not understand that the "1921 men" referred to are those who were taken on the register at the time of the enactment of the Dentists Act 1921. These men do not possess a university qualification.

The statement follows:

The Position of Dentistry in Britain Today

OUR PRESENT DISCONTENT
(JULY 1949)

"Things are what they are, describe them as we may, and their consequences will be what they will be, prophesy of them as we choose; we must therefore be impartial investigators of social facts before we become zealous reformers of social wrongs."

SOCIAL FACTS

It is an undoubted fact that the comprehensive Dental Health Service satisfies neither the Government, the Profession nor the people. An impartial and dispassionate investigation into the reasons for this universal dissatisfaction would appear desirable. It is proposed to start therefore, with the facts which affect every individual in the community and his or her every activity whether personal, professional, commercial, civic, national or international.

A. *Poverty Stricken Nation*

Great Britain, after the war, was not so much a poor as a *Poverty Stricken Nation.* Poor nations such as Norway, or Denmark are accustomed to poverty. The life and country are organized accordingly. The post-war poverty of Great Britain, to those who recognized the fact, came as a great shock.

IMPLICATIONS OF A.

Rich Man's Outlook:—

1. the whole nation had a rich man's outlook on life. In proportion to education and experience this outlook was discounted. The majority of the nation, however, have probably found it difficult to comprehend and face this fact.

Rich Man's Environment

2. Great Britain, for more than a century and a half, had been a very rich country, and, therefore we all had a rich man's environment; in other words we were a nation of poor men and women doomed to live in houses built for rich men, and moreover we were accustomed to that state of comfort known as civilization and

at the same time denied those amenities (motor cars, coal and electricity, transport, abundance of good food etc.) which makes civilization agreeable.

B. *Over-Population*

Great Britain together with Northern Ireland, as a self-supporting unit, is over populated. The population of Great Britain is about 49,748,000 and its area 89,041 square miles which is 558 to the square mile. It is estimated that we produce enough food for about 35 million people.

Statistics of some of the other countries are interesting and instructive:

U.S.A.	45	to the square mile
Canada	6	" "
Denmark	237	" "
France	192	" "

Implications of B.

Shortage of Agricultural Land—Our food is heavily subsidized and we are living on the bounty of the United States and Canada and the other Dominions and Colonies to the tune of from 4 to 5 million dollars each day.

N.B. Our debt is dollars, not sterling.

C. *The Labour Government*

The power has passed into the hands of what may be compendiously described as the masses, i.e. organized labour. It would seem that this phenomenon is to be looked upon evolutionary and not revolutionary, being in the main a by-product of education.

Implications of C

Evolutionary Nature of Present Government—If this assumption be correct, it is not reversible, i.e. we cannot expect to return to the old type of Conservative or Liberal Government but our governments in future will be either right or left labour. Increased possessions meaning increased responsibility.

Inasmuch as no democracy can endure and flourish without an educated electorate, it is the duty at all times of those of us who have had the privilege of a broad and generous education, to educate those of our less fortunate fellow countrymen who have not enjoyed this educational privilege.

Definition of Democracy

Democracy is a state of society in which we have, not licence to do as we wish, but freedom to do as we ought.

Appropriate Sanction for Anti-democratic Behaviour—Moreover if we do not do as we ought that freedom will be taken away from us and we shall be under either a Communist or Military Dictatorship.

What is written above is claimed to be statements of facts and it is suggested that they should be subjected to the cold clear light of reason for consideration and criticism before rejection or acceptance.

Dental Facts

Before considering the facts of dentistry, it is important to be in agreement upon what precisely the term "dentistry" means. Two definitions are here given.

Definition of Dentistry

(1) Dentistry is an Art based on a Science, being an integral department of the Health Service. viz. directly concerned with the teeth and the surrounding tissues, indirectly with the whole of the rest of the body. This is an 'ad hoc' definition to clarify medico-dental relations.

The Field of Action of Dentistry

(2) Dentistry is the Health Service specifically concerned with the establishment, maintenance, restoration and improvement of the health, functions and appearance of the oral cavity and its associated parts in their relationship with the individual as a whole.

This includes the recognition of the oral signs of systemic diseases, the prevention and treatment of oral diseases, injuries, malformations and deficiencies; the repair of teeth when damaged by accident or disease, and their replacement when lost.

The Field of Dentistry then, is comparable with the Fields of Opthalmology, Laryngology, Otology and Dermatology; and its social importance and opportunities are at least as great.

From the definition above and the comment in the third paragraph, it is evident that modern dentistry may, with propriety, be termed Odonto-Stomatology, Branch of Medicine.

Great Britain is confronted with the paradoxical situation of over-population combined with shortage of man power in all professions and industries.

Dental Manpower

In the Report of the Teviot Committee the number of dentists on the Register December 31, 1942, is given as 15,192 of whom 12,812 were estimated to be either in private practice or under local authorities. Of these roughly one third were 1921 men.

In June 1949 the Chief Dental Officer, Dr. Senior, speaking at Milan, stated: "It has been estimated that there are approximately 10,000 dentists available for general dental service in England and Wales, of which number a little over 90% have joined the Service; this figure does not include dentists in Hospitals, Consultants or Priority Service."

Exact figures are not available but it would seem reasonable to deduce that in England the ratio of dentists to population is roughly 1-4,000, and one third of these dentists are 1921 men. It may be compared with the ratio in some other countries. In the United States the ratio is round about 1-2,000 of which all dentists are University Graduates. In the United States in 1940 Brig. General Leigh Hunt, the head of the Military Dental Service in Washington, informed me that not 25% of the American nation were receiving adequate and high grade dental treatment.

England	1	dentist to	4,000	population
Sweden	1	"	2,440	"
Switzerland	1	"	2,300	"
Denmark	1	"	2,200	"
U.S.A.	1	"	2,000	"
Norway	1	"	1,890	"

(These figures are approximate)

All these countries, including Norway, complain of a shortage of dental manpower.

NEGOTIATING BODIES IN THE COMPREHENSIVE DENTAL HEALTH SERVICE

The dental curriculum is concerned chiefly with various branches of *natural science,* but comprehensive dental service is a branch of *social science,* dealing with individuals and groups of individuals. The protagonists in the negotiations which led up to the introduction of the Comprehensive Health Service on 5th July, 1948, were in the eyes of the public and the profession, the Minister of Health and the Councils of the three Dental Societies.

Unfortunately there has been lacking between the two parties concerned, that full spirit of mutual confidence and mutual understanding which is so extremely helpful in clearing up those misapprehensions which must always arise during the course of prolonged conferences, and moreover this spirit would seem to be almost an essential prerequisite, if a discussion is to yield its best fruit.

The Ministry of Health Team

This is composed of the Minister of Health himself, the Chief Medical Officer, the Chief Dental Officer and the Senior Members of his Staff, and such other officials of the Ministry as it may seem useful to co-opt.

The Professional Team

This technically includes the members of every Dental Organization and Society in the country, since all are concerned directly or indirectly by the Scheme.

With the definition in mind of Dentistry as an Art based on a Science, being an integral department of the Health Service, and in order to clarify matters, the profession may be regarded as falling into two classes. Organized dentistry and dental organizations.

The Dental Organizations

> *The ART of Dentistry*—The Society which is concerned solely with what may be described as precision dentistry, is the American Dental Society of London. A select body of 50, of which membership is practically reserved for those holding the American degree, together with a few men of outstanding operative ability holding the English qualification only.
>
> *The SCIENCE of Dentistry*—The Odontological Section of the Royal Society of Medicine is concerned solely with the scientific side of dentistry.

The Dental Health Service as a service of health is not the concern of these two Societies, but of what I have called organized dentistry.

Organized Dentistry

This includes the B.D.A. and the two other dental Societies, the P.D.S.A. and the I.D.S. which are soon to be amalgamated. These Associations very appropriately make contact with the Ministry of Health and enter into politics in its true sense, that is the Art and Science of Government, and the Health Service of the Nation is dependent upon the activities and achievements of these three Societies. It should perhaps be added that the British Dental Association is not only con-

cerned with the health, but each issue of its Journal contains excellent scientific articles and also it deals to a lesser degree with the technique of dentistry. These remarks apply equally to the P.D.S.A. and to a lesser degree to that of the I.D.S.

The Group Movement

From the very outset, the Groups have shown great enthusiasm, justly proud of having created a common meeting ground for all members of the profession and feeling moreover, that efforts have hastened the day of unity and amalgamation which would seem to be the only method by which the profession could meet as one body politic and speak with one voice.

The influence and importance of the Groups has received ample and in the opinion of some of the members of the B.D.A., possibly a too generous recognition in the deliberations of the Representative Board.

NEWS FROM THE PROVINCES

MANITOBA

Winnipeg Dental Society

On October 17 this Society held the first of its prearranged 1949-1950 winter schedule of meetings. It is good propaganda to begin with an outstanding speaker. This was accomplished by having Dr. Henry B. Clark, Jr. professor of oral surgery at the dental faculty of the University of Minnesota. When one sees Jr. after a man's name one wonders why it is necessary to distinguish between Sr. and Jr. Dr. Clark Jr succeeded Dr. Clark Sr., at the University of Minnesota. The writer remembers Dr. Clark Sr. at the Northwestern University Dental School and he was a promising lad at that time in 1905.

Well Dr. Clark Jr. had two subjects for discussion on the 17th. One was "Oral Surgery for the General Practitioner," the other "Seven Minimum Essentials for Tooth Removal Operations."

As most of his audience were general practitioners Dr. Clark's talks and illustrative films were quite attractive to the audience of G. P.'s. Dr. Clark has the personality of a G.P. along with the education, skill and ability of a specialist so he had his listeners with him right from the start. His audience was large, attentive and appreciative. What more could a clinician desire? The sessions on the 17th occupied the afternoon and evening of that day, and were presided over by the President of the Society, Dr. Joseph Rumberg.

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Manitoba Dental Association

The 1949 Fall journey of the president and secretary of the Canadian Dental Association, Dr. Vernon Fisk and Dr. Don W. Gullett respectively, across western Canada was formally opened at Winnipeg on Saturday evening, November 5. In spite of it being Saturday night when most wives and sweethearts expect their men folk to devote the evening to them, about 50 strong minded men came out to do honour to our guests and listen to their words of wisdom. And all of us who attended sincerely believe that those who did not have the moral courage to assert their independence are the losers. The President, Dr. Fisk devoted his time to enlarging on the activities of several of the most important committees of the C.D.A. including Health Insurance, Dental Public Health, Hospital Dental Service, Dental Education and the Finance Committee.

Dr. Gullet spoke on the subject "Social Trends." These "Trends" include free (so called) health services such as are being dispensed in Great Britain during the past year or more. He believes that Canada has already taken several steps leading toward conditions in Canada similar to those now in existence in Great Britain and that the quickest and surest way to socialize a country is to begin with the health professions. J. F. M.

ONTARIO

Ottawa Dental Society

The season's program of this Society has now been pretty well completed. A series of five dinner meetings is planned and the guest speakers are as follows—

November meeting was Dr. George Wood Clapp of New York

December meeting is Dr. James Coupland

January,—speaker to be announced

February,—Dr. Felix French

March,—Children's Dental health day program.

The officers of the Association are—
President,—Dr. John French
Past President,—Dr. George Barrett
Vice-President,—Dr. Alan Stinson
Sec.-Treasurer,—Dr. Lorne Barnabe
Directors,—Drs. Wes. Richards, Bill Wolfe, Charles Woods, Fred Gollop, Albert Gauthier, Harold Beach. HAROLD BEACH

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Academy of Dentistry, Toronto

The annual dinner meeting of this Society was held on October 17 in the Royal York Hotel, Toronto. President Dr. Ed. White announced an attendance of 340 members and that the Academy had a paid up membership of 450 members.

Dr. Harry S. Thompson so widely known in the dental profession for his fine contributions and leadership in dental public health was elected an honorary life member of the Association. Dr. J. E. McMulkin made the presentation to Dr. Thompson.

Dr. J. H. Johnson presented Dr. Harold Shepherd with a past presidents' jewel. Dr. Earl Bancroft made a presentation to the three ladies' organizations present—Ladies' Dental Auxiliary, Dental Nurses' Alumni and the Dental Nurses' and Assistants' Association.

Mr. Gratton O'Leary of the Ottawa Journal was guest speaker of the evening. He chose as his subject—"Six of Canada's Prime Ministers."

In his opening sentences he suggested he might speak on the rather painful and difficult world conditions and so make another conjectural contribution to what the future holds in store. Instead however he chose to speak of the qualities of six great men of Canada who had risen to the heights of leadership in the parliament of Canada. It was a sort of invitation to reflection and study of the lives of great men and progress Canada has made in the last forty-five years.

It was a fine address and a splendid meeting to open another year's program.

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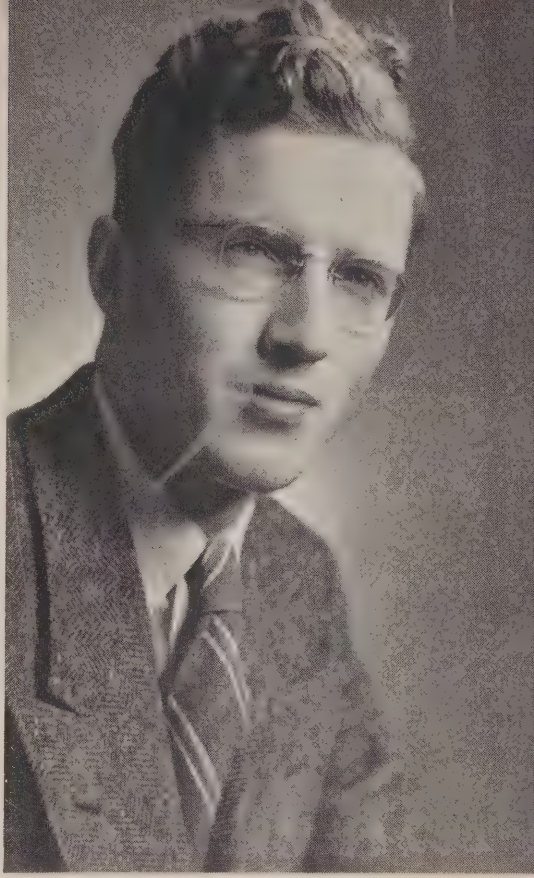
Niagara Peninsula Dental Association

On the evening of October 7, seventy dentists and their ladies held their annual Ladies' Night in the form of a banquet at the Rathfois Inn, Port Colborne. Members of the Association from all over the peninsula were present, and also guests from Buffalo and Toronto. Dr. C. Wray proposed a toast to the ladies and Mrs. G. Bannister responded.

Dr. Lee Honey introduced the speaker, Mr. Louis Blake Duff who gave an interesting and humorous address entitled "Names". He carried his listeners through the history of both personal and place names, from Anglo-Saxon and Norman times through early American and Indian periods down to the present day. An unique feature of his address was the fact that in the formation of the counties of early Canada, our part of the country from Hamilton to the Niagara River was called Lincoln and the names of all the towns and hamlets were called after cities and towns in Lincolnshire. Hence—Grimsby, Saltfleet, Thorold, Caistor and Binbrook.

At the conclusion of his excellent address he was presented with a gift by Dr. H. B. Rickard, dean of Port Colborne dentists.

Mrs. F. E. Dawe and Mrs. L. B. Duff were presented with flowers by Dr. D. Johnston, Niagara Falls and Dr. A. Crich, Grimsby Beach. The past president, Dr. F. E. Dawe, was presented with a suitably inscribed miniature gavel by Dr. E. C. Butcher, Port Colborne, president of the Association, to conclude a very enjoyable Ladies' Night. E. C. BUTCHER



DR. JOHN FRENCH
President Ottawa Dental Society.

The Williams Gold Refining Company Entertains The Toronto Study Club of Dental Technicians

For the first meeting of the 1949-50 season, the Toronto Study Club was the guest of the Williams Gold Refining Company in Buffalo, on Saturday, September 17, 1949. Most of the members made the trip by bus, starting from Toronto and picking up members in Hamilton on the way.

The first stop was Cherry Hill Golf Club. There the golfing members made ready to play for the "Charles Daly Trophy", in which competition our friend Dr. Ringle took part. The non-golfers were escorted by Bud and Frank Williams to the Buffalo Canoe Club. Later, they rejoined the golfers in time for dinner. Tommy O'Neil, a two-time winner, lost out in this game to Jimmy Price, who walked off with the trophy. Nice going, Jimmy! And for the rest of the golfers, they all won prizes too. The presentations were made after a sumptuous dinner served on the summer verandah of the Club House.

The party then moved on to the Williams Plant in Buffalo, where things were started off with a very enlightening, illustrated talk by Frank Williams on the results of bending and heat treating gold. Dr. Ringle then took over with general information on this subject and on actual casting of gold by an entirely new High Frequency Casting Machine. The members were taken then on an extensive tour of the plant, conducted by Dr. Ringle who was plied continually with innumerable questions.

For the crowning event, the members were taken to the Buffalo Launch Club on Grand Island, where the Study Club, 44 strong, were served a dinner that could not be surpassed. Mr. William Taylor then thanked the hosts for a highly educational and enjoyable day.

P.S.—C. L. Daly, one of the Deans of Toronto Technicians is back on the job again after his second bout with pneumonia. You can't keep a good man down for long!

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Toronto Study Club of Dental Technicians Guest of Handy and Harman, Toronto

The Toronto Study Club of Dental Technicians spent a very profitable and enjoyable evening at the plant of Handy and Harman, on October 12. Mr. Walter Gildner, who is a well-known figure to most Toronto technicians, opened the meeting with a brief talk and explanation in the use of specialized equipment to improve and perfect the efficiency of the modern laboratory.

The host and clinician, Mr. T. H. (Tom) Gallagher, a graduate of Edinburgh University in Metallurgical Engineering, gave a practical and very complete talk on the fundamentals of the use of precious metals in Dentistry, as well as valuable basic information on the everyday lab. technique in the handling of these metals.

After his talk, Mr. Gallagher conducted a lengthy question and answer period; the number of questions fired at him certainly showed the high interest taken in his subject by everyone there. Incidently, Mr. Gallagher seems to have a great respect for Mother Nature; so much so that it can be safely said that he is Scotland's answer to America's "Nature Boy".

For the concluding event of the evening, the members were conducted on a tour of the entire Handy and Harman plant.

Mr. Harry Posen extended sincere thanks to the speakers on behalf of all members present.

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Dr. Harold Hillenbrand Addresses Academy of Dentistry, Toronto

The general secretary of the American Dental Association, Dr. Harold Hillenbrand, was guest speaker before members of this Society on November 10.

Dr. Hillenbrand who has a keen mind, and an observing eye demonstrated that he is well informed on matters concerning the dental profession. In a very capable manner he portrayed a word picture of dental affairs in the United States which was of much interest. A brief summary of his remarks follow.

The speaker suggested that health legislation in the United States had now become a political issue and when a matter enters the political stage, history has shown that decisions will soon be made—perhaps in the next two years.

He pointed out that health legislation would be enacted as part of a stronger social program that is being developed. He stated in effect that the American Dental Association was opposed to federal compulsory health insurance but that it favoured a program of dental

care designed to help people wherever located who were unable to pay the whole cost. He said, "There is a universal dental need and dental care should be available to all."

Whose job is it to provide this dental care? It is primarily the individual's responsibility, then the state and finally the Federal government.

In speaking of dental personnel, he stated that in late years it had been decreasing but at present the situation is improving. There is no lack of students because just now there are six young people in United States who want to study Dentistry for every one who can be accommodated in American dental schools. But new schools are on the way and this is one place where Federal government grants might well be appropriated to assist in building costs for dental care.

In regard to auxiliary dental personnel he stated the demand for hygienists was greater by tenfold than the supply. Dental technicians was another matter. Last year dental technical schools trained 2600 and the laboratories were training another 5000 apprentices while the profession can only absorb 500 technicians per year. Further he stated that one fifth of the money spent in the United States for dental care in 1948 was handled by the dental laboratories.

Dr. Hillenbrand illustrated the problem of dental need and facilities to meet this need quite forcibly. He said "Suppose the dental need of the people could be represented by a large circle and dental resources to meet that need by a small circle; it is then the job of our profession, the social workers, the public health workers, and the Government to make these circles congruent."

To do this the American Dental Association program emphasized the promotion of three things—

1. *More dental research.* In the United States one million dollars was spent annually for dental research while 110 million was spent for Medical research. One million dollars is one tenth of one per cent of the annual dental income while 110 million was about 6% of Medical income. Moreover it must be recognized that most funds for research must come from public funds.

2. *Public Dental Health Education*—people must be taught to beware of dental diseases and how to cope with them.

3. *Dental Care.* Profession must concentrate on the care of young people and give priority to children if a generation of better dental health is to materialize.

Adequate concentration on these three factors coupled with effective promotion can do much to close the gap between dental need and available dental service.

The speaker then inferred that this is the approach to our great dental problem rather than federal compulsory dental health insurance. Then he concluded by saying "Treatment of human beings cannot be done on a standardized basis, because there are neither standardized dentists or standardized patients."

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Dr. S. A. MacGregor Honoured

A fellowship in the International College of Dentists was conferred on Dr. MacGregor during the summer. For many years he has given generously of his energy, talents and ability in promoting better dental care for children. This recognition is well deserved.

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Ladies' Auxiliary to the Academy of Dentistry Toronto

Mrs. W. W. Philp, president of the group, presided at the opening luncheon at Chez Paree on November 17. Dean R. G. Ellis presented a project for the year. Dr. A. D. A. Mason gave an illustrated lecture on the trip he and Mrs. Mason made to Australia.

The Ladies' Auxiliary to the Academy of Dentistry held their annual membership tea at Prince Arthur House, October 20.

The guests were received by the President, Mrs. W. W. Philp, Mrs. F. H. Shepherd, Mrs. E. A. White, Mrs. R. G. Ellis, and the following ladies presided at the tea table—Mrs. L. R. Davidson, Mrs. M. G. Boyes, Mrs. R. W. Matchett, Mrs. F. L. Dayment and their assistants were Mrs. J. E. Verth, Mrs. K. M. McPherson, Mrs. C. I. Treadwell, Mrs. J. D. Barnett, Mrs. J. G. Glascott, Mrs. J. H. Johnson, Mrs. D. L. McKenzie and Mrs. H. Milburn.

Katherine Treadwell,
Publicity Convenor.

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Dental Nurses' Alumnae

The Dental Nurses' Alumnae Association held a well attended meeting at the I.O.D.E. headquarters on November 2. To review thirty years of dental nursing and bring suggestions for the future of the profession, Dean

Roy G. Ellis, guest speaker of the evening, chose as his subject: "Calling all Alumnae members." The Dean concluded by showing his beautiful films of the British Isles. Miss Irene McKenzie, social convener, served coffee in the headquarters' dining room. The members were able to make a large bundle of cancer dressings at the sewing hour prior to the meeting. This is one of their projects in aid of the Ontario Cancer Society.

The children of St. Christopher House were entertained by the Alumnae at their annual Christmas party held on Wednesday, December 7.

A. Cowling,
Corresponding Secretary.

QUEBEC

Montreal Dental Club Annual Fall

SILVER ANNIVERSARY OBSERVED

Ten members of the original executive of the Montreal Dental Clubs' Annual Fall Clinic were honoured at the first luncheon of the Clinic's Silver Anniversary October 19-21, 1949. They were Drs. F. G. Henry, F. H. A. Baxter, A. L. Walsh, A. W. McClelland, G. S. Cameron, H. R. Cleveland, J. C. Flanagan, R. W. Edmison J. S. Common, and D. P. Mowry. Absent through illness were Doctors H. V. Driver and C. F. Morison. Doctors J. S. Dohan and W. C. Bushell were unable to attend inasmuch as they were attending the American Dental Association Meeting at the time. Fate has removed four of the originals in the persons of Doctors F. H. Bradley, J. Rubin, F. A. Stevenson and A. N. Jenks.

The president of the Montreal Dental Club, Dr. A. Douglas Richardson, welcomed them with a few well chosen words and in his President's chat referred to their vision, their gifts of time and their underwriting of the project. Today, he said, "We are proud of your efforts and we trust that you are duly proud as you survey the results of your labour. Efforts, launched on a modest scale for information and benefits of club members only, now expanded over the period of twenty-five years into an undertaking of some magnitude and open to all who care to benefit therefrom."

Dr. Richardson announced an attendance of some 375 dental surgeons, a large registration of dental nurses at their annual gathering, and the presence of the dental students from Montreal's two dental schools.

Prevention was the keynote of the program with great stress being laid upon the treatment of children. Varied discussions were held on the question of diet and the use of Carbohydrates (refined) in our present day diet and the alarming rate at which the consumption of sugar is climbing in our North American continent.

Dr. R. Ronald Wyman, Associate Professor of Pedodontics of Tufts College, Boston, Mass., U.S.A., dealt with operative dentistry for children by the general practitioner. Dr. Wyman pleaded for more careful treatment and constant check ups for our children. He also stressed immediate brushing of the teeth after eating and the use of raw fruits and vegetables.

Dr. James Coupland, of Ottawa, besides discussing the production of dental radiograms of high diagnostic quality by perfect positioning, retention of the film packet and manipulation of the machine also pointed out the value of radiographic examination of the child. He said that some twenty per cent of dental x-rays taken of these little subjects, disclosed some disturbances and that the children's entire dental future may depend on the information disclosed.

Correction of some of these faults found in the x-rays was the topic of Dr. J. A. Salzmann, Head of the Orthodontic Clinic, Mount Sinai Hospital, New York. He said there was plenty the general practitioner should know about the growth and development of the dental arches and plenty he can do to prevent and intercept malocclusion before treatment with appliances becomes necessary and also how orthodontic principles can be of value to the general practitioner. The usual question of thumb sucking received its own quota of pros and cons.

It may be necessary, for one reason or another on some occasions, to resort to general anaesthesia for operative procedure in some children. Dr. C. R. Stevens, Director of Anaesthesia of the Children's Memorial Hospital, Montreal, described such technique in full and cited many cases ranging from forty minutes to two hours. These were done, some in the outdoor department of the hospital and some in private offices, but none were admitted to the hospital.

Other clinics were the Surgical Treatment of Periodontoclasia by Dr. J. R. Conant of the United States Navy: Dental Amalgam by

Dr. G. Glasson, B.S. of the National Bureau of Standards, Washington, D.C., U.S.A.; The use of Diamonds in Dentistry by J. D. Gage, D.D.S. of Cleveland, Ohio. Removable Partial Denture Prosthesis and Full Denture Prosthesis were discussed by Dr. R. Godfrey, Professor of Prosthetics of the University of Toronto Dental School, and by Dr. I. K. Lowry of Montreal, respectively. Dr. H. Heinz of Utica, New York dealt with Oral Surgery, while Dr. R. O. Schlosser, of Northwestern Dental School, Chicago, Ill., carried on a successful progressive clinic on Immediate Complete Denture Prosthesis.

In keeping with the Silver Anniversary commemoration, special functions of a lighter nature were evident. Visiting ladies were entertained at a tea at the Faculty Club of McGill University. The Dental Nurses' Association tendered a reception to all delegates and their wives in the Palm Court of the Mount Royal Hotel. A Silver Anniversary Dinner and Dance catered to a large number at the Ritz Carlton Hotel. Dr. G. Vernon Fisk, President of the Canadian Dental Association, and Mrs. Fisk graced the head table and Dr. Fisk was the evening's speaker. Mrs. Fisk blew out the candles on a large birthday cake, and all, after dining sumptuously, enjoyed the remainder of the evening in dancing.

J. W. ABRAHAM

NOVA SCOTIA

Halifax Dental Society

The annual meeting of this society was held at the Nova Scotian Hotel on October 13.

The meeting was addressed by Mr. MacNeil, manager of Maritime Medical Care, Incorporated.

Records procured from the American Dental Association, on the care of the teeth and diet, were played to the society. These records were enacted by such comedians as Bob Hope and Amos and Andy. The society hope to make these available to the Halifax schools for teaching purposes.

The following slate of officers was elected for the coming year:

President: Dr. J. P. McGuigan
Vice-Pres: Dr. W. Barnstead
Sec-Treasurer: Dr. F. C. Fennell
Executive member: Dr. A. H. Ervin

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Sydney Dental Society

The members of this Society, are taking the telephone post graduate courses, put on by the University of Illinois.

The Halifax dental assistants held their first Autumn meeting recently, when plans for a busy Winter were formulated. Funds for charitable purposes were donated.

ALBERTA

Edmonton District Dental Society

A meeting of this Society was held on October 25, at the MacDonald Hotel. This meeting took the form of a dinner at 6:30 p.m., followed later by a clinical discussion.

The speaker for the evening was Dr. Hillard R. Nevin who covered the injection technique for operative and surgical procedures. His talks were supplemented by three sound motion pictures in colour on the following subjects:

(a) Mandibular Anaesthesia.
(b) Infra-orbital Injection.
(c) Tuberosity, Posterior, Palliative and Secondary Division Injections.

Dr. Nevin came direct from the meeting of the American Dental Association in San Francisco where he also presented this illustrative talk. There were 65 members present and the meeting was enjoyed by all from an instructive and social standpoint.

On December 6 Dr. Sperry Fraser, Associate Professor of Prosthetic Dentistry at Alberta University, who has recently returned from a year's post-graduate course at the University of California, will conduct an afternoon and evening clinic on prosthetic dentistry.

W. E ADDINELL.

EMPIRE NEWS

GREAT BRITAIN

Bevan's New Attack on Dentists

Mr. Aneurin Bevan, Minister of Health, in an attack in the House of Commons yesterday on dentists, said that the dental profession had been guilty of worse conduct than any other profession in the National Health Service. He rejected, however, a proposal that dentists working under the service should not be allowed to accept payment from private patients—a proposal that had been made by a dentist M.P. in order, as he said, to defeat

"rackets" being carried on by certain members of the profession.

The debate was on the National Health Service (Amendment) Bill and reference was also made to foreigners who use the scheme. Mr. Bevan said he proposed to take action to prevent abuse of the service by people who deliberately come to this country for that purpose.

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Honorary Fellowship for Dr. William Guy

Dr. William Guy, former Principal of Edinburgh Dental Hospital and School, who is now in his 90th year, was honoured at a reception held in the hall of the Royal College of Surgeons of Edinburgh on July 25, when there were conferred on him by the college the first Honorary Fellowship in Dental Surgery, and by the Royal College of Surgeons of England the honour of Fellow in Dental Surgery.

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Children's Teeth are "In Grave Danger"

Mr. J. Young, Chief Dental Officer, Glamorganshire County Council, President, Society of Medical Officers of Health (Dental Group), said at the annual meeting of the Society in London recently:

"The children's teeth are in grave danger. Adults are receiving dental treatment at the expense of the children because of the drift of dentists from priority work.

"There is still chance of recovery by prompt action by the Government and the local authorities."—D. Mag. and Oral Topics.

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Mental Cure—By a Dentist

Dr. Thomas Graves, Medical Superintendent of Rubery Mental Hospital, Birmingham, urged need for greater attention to be paid to physical disturbances in connection with the treatment of mental ill-health, when he spoke in a discussion at a mental health conference in London.

He gave an instance, says the Birmingham Evening Despatch, of a 16-year-old schoolboy, who, while working for matriculation, showed a mild degree of mental instability attributed to overwork. This rapidly intensified, and he was eventually treated for schizophrenia, but without benefit. He was admitted to Rubery Hill Mental Hospital, where a thorough study of him revealed that he had impacted wisdom teeth and stomach trouble.

Dr. Graves added that a month after the abnormal teeth were removed, the boy was playing tennis and cricket, and six weeks afterwards was able to leave the mental hospital — three months after admission — recovered from his mental illness.—D. Mag. and Oral Topics.

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Health Service

National prosperity, it is believed, is necessarily increased by the advancement of medicine. The truth is that it is both increased and diminished. It is increased by treatment which secures without disproportionate expense complete recovery in the young and middle-aged; it is diminished by measures which promote the survival of the unfit without making them fit and by those which merely prolong invalidism at a level incompatible with functional efficiency. The question is, which of these two actions predominates? I believe it depends upon the stage of development to which medicine and civilization have attained. At lower stages the effect is a pure enrichment of society, but, as civilization advances, the opposite factor exerts an increasing back-lash until at a certain point national prosperity is threatened. I do not say that we have reached this point, but we are certainly moving towards it. We are cured of the simpler and cheaper diseases to fall victim later on to the more complex and more expensive. This is the price which society pays for lengthening the expectation of life.

I believe that through ignorance and miscalculation in its preparation the cost of the Health Service in Britain has been grossly underestimated, that when in full operation it will be not less than £500 million, and that in future years it will rise to an even higher figure. Whatever the exact figure, I am firmly convinced that at the present rate of expenditure it will involve us in national ruin. The alternative is hardly less comforting. It is that a limit will be set by shortage of personnel and materials. This means (mark it well) that medicine will be rationed and controlled, and there is no reason for supposing that nationalized medicine possesses any moral superiority rendering it immune from the vices which rationing and control invariably bring in their train.—Ffrangcon Roberts, M.D., Br. Med. J. February 19, 1949.

GENERAL NEWS

A.D.A. Campaign to Send Dental Books Abroad Through CARE

To help inform dentists and dental students throughout the world on recent technical advances in their field, the American Dental Association, at its recent annual convention in San Francisco, approved plans for a fund campaign to support the CARE-UNESCO Book Program.

CARE will use the funds raised by the A.D.A. to send the latest dental books, in the Association's name, to war-wrecked dental schools and libraries in Europe and Asia. In stressing the campaign's importance, Dr. Clyde S. Minges, of Rocky Mount, N.C., retiring president of the Association, declared:

"Americans, with the finest dental care in the world, must assume part of the responsibility of informing dentists in other parts of the globe, particularly in war-devastated areas, about our tremendous technical advances made during and since the war."

Under the Book Program which CARE, in cooperation with UNESCO, has added to its food and textile package service, cash donations from the public are used to purchase and send the latest and best scientific and technical books published in English to universities, libraries and technical schools overseas. Dentistry is one of 19 book categories covered in the plan. Educational institutions abroad are queried on their book needs, so

CANADIAN-U.S. DENTAL BOOK CAMPAIGNERS

Dr. Don W. Gullet (right), executive secretary of the Canadian Dental Association, Toronto, and Dr. Clyde S. Minges (left), former president of the American Dental Association, shown at the recent A.D.A. convention in San Francisco, discussing plans for fund campaigns in the United States and Canada, to send the latest research books overseas through CARE. In the centre is Dr. Robert Stanforth, liaison officer for the CARE-UNESCO Book Program, for which the A.D.A. hopes to raise $250,000 to replenish dental libraries in war-depleted countries of Europe and Asia. Full information on the Book Program can be obtained from Canadian CARE, 73 Albert St., Ottawa, Canada.

that the gifts fill actual wants. CARE's purchases are based on extensive book lists compiled by a professional committee.

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Thumb Sucking

Psychologists haven't quite persuaded orthodontists that it is proper to let a child suck its thumb, says Dr. A. R. Winn of McGill University's Department of Orthodontics in an article—"Orthodontics and Civilization"—in the current issue of HEALTH, Canada's National Health Magazine.

"They say that stopping the habit will do something to the child's personality, etc., etc., and that the teeth can easily be straightened later," comments Dr. Winn in his contribution to HEALTH which is published by the Health League of Canada. "I wonder if having to live for a number of years behind the deformed face of a habitual thumb-sucker doesn't do something to the personality too?

"Also the thought can't help cropping up that the psychologist doesn't have to do the job of trying to correct displaced teeth, which is often anything but easy; furthermore, he doesn't have to pay for it. Anyway this contains another suggestion for prevention of a certain type of malocclusion of the teeth. If thumb-sucking indicates a craving for more affection on the part of the child, give it more affection, and at the same time stop the habit; not by constant nagging, which won't work, but by constant encouragement."

Dr. Winn suggests a lot of blame for irregular teeth can be traced to civilization — the knife and fork, soft well-cooked foods. These give the jaws less work to do and prevent their proper development. At the present, "native populations" throughout the world show better developed jaws than civilized ones.

He emphasizes that children should be given tough foods to chew—and that breast-fed babies develop sturdier jaws than bottle-fed infants. Further, the writer states, mouth-breathing changes jaw and facial features. Some irregularities run in families. Prevention in this case, says Dr. Winn, is "simply a matter of choosing the right parents."

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Compulsory Health Insurance

Excerpt from N.Y. State D. Jour.

The medical and dental health of our 143,000,000 people is exactly in proportion to the number of its competent physicians and dentists. No legislation can change that fact.

Break down the professional bond that now exists between the dentist and his patient and substitute for it, mass treatment, office queues, streamlined dentistry and bureaucratic supervision, and you offer no incentive to the young aspiring college graduate to enter the profession. You offer only an easy sinecure to the inefficient and incompetent drone. If any system of compulsory health insurance should be inaugurated in this country, it is clear as crystal that the number of competent dentists in the next generation will enormously decline and that the general dental health of the nation will consequently deteriorate to a point almost beyond our imagination to conceive.

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Telephone Course

One hundred and forty-one dental societies from coast to coast will participate in the extension course by telephone which will start this fall. Groups in thirty-eight states, the District of Columbia, and Canada have forwarded registrations to the University. It is predicted that at least 7,600 dentists will hear the series, entitled "Current Advances in Dentistry."

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Psychosomatic Sleep

There are now about seventy-five dentists here in the Northwest who have been trained in this technique. Most of them are using it more or less frequently. Up to this writing no unpleasant effects and no serious problems have arisen. None of the alarming fears expressed by some critics has been realized. If however, this satisfactory state of affairs is to continue, it will be necessary for those using this method to continue to be wise and ethical and careful.

After listening to all of the warnings and the expressions of so many fears and doubts in connection with the use of hypnosis in dentistry, it is rather astonishing to contemplate the fact that there have now been performed more than 1,500 successful dental operations here in the Northwest. It is more astonishing still to know that all this has been accomplished in less than two years and without any serious untoward incident. Let us keep the record clear. Let us discourage sensationalism and stage shows. Lets us keep

the practice on a wise and ethical plane for the benefit of our patients.

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Dr. K. C. Campbell Honoured

Dr. K. C. Campbell, 'Ol, R.C.D.S., formerly in practice in Winnipeg, now in London, was elected President of the American Dental Society of Europe at its Annual Meeting, in Paris in August.

The next meeting will be held in Amsterdam, July 19th to 22nd, 1950.

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Department of National Health and Welfare

H. R. MacLaren, D.D.S., D.D.P.H., of Ottawa, assistant chief of the dental health division, Department of National Health and Welfare, was elected vice-chairman of the dental health section of the American Public Health Association at its 77th annual meeting in New York City recently. Dr. MacLaren is the only Canadian on the executive of the dental health section.

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Health Plan Arouses Protests

The Truman health plan as sponsored by Oscar Ewing, is stirring up a string of protests from organizations everywhere. Resolutions attacking compulsory health insurance have been adopted by over 1,500 business, civic, trade, industrial, farm, veteran, religious, and fraternal groups, according to American Medical Association sources.

Four large insurance companies and five national lumber associations are among those who have expressed themselves publicly as opposed to the Truman plan for government regulations of medical services.

A resolution by the Combined Insurance Company of America emphasizes that . . . "There is nothing that the Government can do for the American family in the field of health insurance that voluntary health insurance can't do better—and at less cost." Voluntary plans now cover in excess of 61 million persons.

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Number of Dentists in U.S.A.

The United States had a total of 86,904 dentists in mid-1949—an everage of one dentist for each 1,727 residents—it has been reported by the Bureau of Economic Research and Statistics of the American Dental Association.

The new estimated total is a gain of approximately 5,600 over the number of dentists listed in similar survey conducted by the Association two years ago. In 1947, it was estimated that the dentist-population ratio was 1 dentist for each 1,817 persons.

The report also revealed that 2,767 dentists, or about one in each 30, are employed by the Army, Air Forces, Navy, Veterans Administration and United States Public Health Service.

Distribution of dentists throughout the nation still varies widely. according to the report, ranging from a ratio of one dentist to each 1,029 residents in New York state to a ratio of one dentist for each 4,472 residents of South Carolina.

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Cost of Dental Firm Trials

The total cost of the prosecution of Canadian dental firms for alleged offences under the Combines Investigation Act was $63,592.29. Of this $35,995.11 was spent in lower court trials and $26,597.48 on appeal court hearings.

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Better Business Bureau Warns of Fraud

Chicago physicians and dentists are the target of a new scheme being operated locally in the magazine subscription field. Solicitors from the "Physicians' Receptions Service" are selling subscriptions on a three-year basis for a certain magazine. Gullible subscribers are then offered two additional magazines to be furnished without additional cost. Invariably the solicitor has sought and sometimes has collected $9.00.

Publishers of the three magazines involved in the phony deal advise that they have never heard of a "Physicians' Reception Service."

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Federal National Health Insurance in U.S.A.

"A battle of words has raged for a long time over the Truman national compulsory health insurance program and most of it has consisted of generalities. But the president-elect of the American Medical Association, Dr. E. L. Henderson, has just made a public statement that gets right down to the specifics. He lists 16 exact provisions under which, he says, the Truman program would

give government control over the administration and distribution of medical care.

"A board consisting of public officials and presidential appointees would, for instance, have the power to decide the 'fair' share of the national health fund each state was to receive. It could set the maximum number of patients for any one doctor. It could decide which doctors might qualify as specialists and what should be 'reasonable' compensation for doctors. The board, Dr. Henderson says, could set hospital standards, fix maximum rates, and determine what hospital services and auxiliary were 'essential'. It could limit or eliminate special health service under certain circumstances. The board's power to alleviate medical shortages in rural areas would seem to imply the power to control where doctors could or could not practise. Dr. Henderson enumerates other specified powers this board would have and cites the very broad authority to make such other consistent regulations 'as might be necessary'.

"The president-elect of the AMA makes precise statements on the provisions for government control of medical, hospital and auxiliary health services under the Truman program. It is up to the proponents of that program now to refute his interpretation or to defend the necessity for delegating to government this sweeping control over the health care of the American people. When we get down to the specifics that Dr. Henderson lists, the Truman program has all the earmarks of 'bureaucratic' medicine and 'political' medicine, whether it is 'socialized' medicine or not. By any name, it is a dangerous dose for which milder, safer remedies are proving progressively more satisfactory."

Editorial, Milwaukee J. September 4, 1949., per Public Health Economics.

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Dentists' Role in Detection of Cancer Outlined

The dentist has an important part to play in the early detection of cancer Dr. G. D. W. Cameron of Ottawa, deputy minister of national health, told the Detroit Dental Society on November 2.

"It is estimated that one out of every seven malignant growths are within the range of vision of the dentist while operating," said Dr. Cameron, adding that some part of Canada's cancer control grant will probably be devoted to professional education to help dentists in the early detection of cancer.

Canada's national health program which, in five years, will bring $165,000,000 in federal funds to the support of provincial health programs, is being used extensively for preventive dentistry, he said. The survey grant is making possible the gathering of data on the extent of dental illness and the availability of dental services, and the public health grant is being used to obtain equipment and staff for dental clinics and health units. In one province (Saskatchewan) four stationary and seven mobile clinics will bring dental care to 40,000 pre-school children.

Dental care is being more widely provided for such institutions as tuberculosis sanatoria, mental hospitals and training schools. Under the professional training grant a number of the 1,200 health workers being trained are dentists, dental nurses and assistants.

A survey on the effect of sodium fluoride in community water supplies is being carried out by the Department of National Health and Welfare, Dr. Cameron explained.

This chemical is being added to the water supply of Brantford, Ont., and two other cities—Sarnia, where the water is free from fluorine, and Stratford, where the water is naturally fluorinated—are being studied as controls. The results of this 10-year survey will not be available before 1956.

"We will have no hesitation in encouraging its nationwide use if and when carefully controlled experiments make our cautious optimism give way to conviction that it should be extended to every community in Canada," Dr. Cameron said.

There is no more certain support to the weak or the young than the feeling of nearness to some friend whom they know to be strong and pure, earnest for what is right and a hater of all evil.—Dr. Percival.

A good conscience is a continual Christmas.—Benjamin Franklin

IN MEMORIAM

Edward Thomas Cleveland of Montreal, Quebec, was born at Kingsey, P.Q. in 1864, and died at Hudson, P.Q., on October 9, 1949.

He was the youngest son of Major and Mrs. Thomas Cleveland of United Empire Loyalist Stock, and was graduated in dentistry from the New York Dental College.

He commenced practice in Richmond, P.Q., and for many years was not only active in his own profession, but also in municipal affairs, at one time occupying a seat as alderman on the town council.

He held the rank of Captain in the 54th, Eastern Townships Regiment and was at one time President of the Province of Quebec Rifle Association.

He was a Knight Templar, and keenly interested in the life of his community, taking great pride in his garden.

He gave up his practice in Richmond in 1901, and came to Montreal, where he practised for over forty-five years.

In association with many well known names in Dentistry, he was one of the first to adopt gold inlay technique, and later became a pioneer in jacket crown porcelain work.

He was a past member of the Art Association of Montreal, and the Arts Club. On one occasion he exhibited one of his pastoral oil paintings at the Annual Spring Exhibition. Painting was his main hobby, and many Montreal homes have the results of his enjoyment in this amateur study of the brush. He was also a keen golfer and played regularly at Summerlea Golf Club. He was an honorary member of the Montreal Dental Club.

Dr. Cleveland is survived by a brother, Dr. Ernest Cleveland, a retired dentist, and two sons, also dentists who are practising in Montreal, Dr. H. Ross Cleveland and Dr. E. Thorburn Cleveland. At the time of his death, he was probably one of Canada's oldest dentists. He had practiced up to two years ago, and always maintained a great interest in the profession after his retirement.

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Keith C. Wasson, of North Battleford, Saskatchewan, aged 47, died in October following a short illness.

He studied Dentistry at the University of Alberta and was graduated in 1929. He was a member of the Canadian Army Dental Corps in the last war, spending four and one half years in England and the continent, retiring with the rank of Captain.

He was an active member of the Rotary club, the Anglican Church, and an ex member of the Saskatchewan Dental Council and of the Kinsmen Club. He will be greatly missed by the residents of his district and the dental profession.

Dr. Wasson is survived by his widow and two children.

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E. Gordon Rodger of Oshawa, Ontario, died on October 21 at the age of 50.

He was graduated from the Faculty of Dentistry, University of Toronto in 1926.

Dr. Rodger is survived by his widow and one son.

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George Maxwell Gorrell of Morrisburg Ontario died on October 22 at the age of 78.

Dr. Gorrell was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1906. He was also a graduate of the Chicago College of Dental Surgery. He practised in Morrisburg until a few months before his death.

Dr. Gorrell was a member of Morrisburg School Board for 29 years and was Chairman from 1940 to 1946.

He was a member of the Masonic Order since 1899. He was a member of St. John's Lodge; a past grand superintendent of St. Lawrence Masonic district; a past grand registrar of Grand Lodge and at one time was a Shriner. With the exception of 2 years he held office in St. John's Chapter from 1906 until his death.

He was an elder in Knox Presbyterian Church. He was also Past president of the Canadian Club, the Fish and Game Club and the Curling Club.

Dr. Gorrell is survived by his widow and one son.

IN MEMORIAM

Alfred Victor Sinclair of Fort William, Ontario, died suddenly at his home on October 11.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1914 and took up practice at Fort William with Dr. Stone.

In 1915 he enlisted in the Canadian Army Dental Corps and served until 1919 with the rank of Captain.

He was a member of St. Andrew's Presbyterian Church, Fort William, the Gyro Club and the Fort William Branch of the Canadian Legion. He was an enthusiastic sportsman, a lover of nature and an accomplished gardener.

Dr. Sinclair is survived by his widow and one daughter.

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Morley Garnet Trewin of Oshawa, Ontario, died at Toronto Western Hospital on October 16 at the age of 72.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1902. He began to practise in Collingwood, later moving to Bowmanville, then to Oshawa where he practised 46 years.

He was recognized as one of Canada's oldest and outstanding dentists. He was a former member of Oshawa Rotary Club; he was an ardent sportsman and a keen hunter and fisherman. In late years he was an enthusiastic member of Oshawa Beagle Club.

Dr. Trewin is survived by one son.

•

Clarence Rowsome of Ottawa died in Ottawa Civic Hospital on October 21 at the age of 52.

"Clare" as he was familiarly known was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1921. He practised in Cobden for 15 years when he moved to Ottawa. He was the official dentist to the Ottawa fire department.

He attended St. James Anglican Church. He was a member of the Lions Club and Cobden Lodge A.F. & A.M.

Dr. Rowsome is survived by his mother, one son and one daughter.

His wife predeceased him 11 years ago.

•

Randolph W. Bradley of Windsor, Ontario, died on October 13 at the age of 51. He had been ill for two months.

Dr. Bradley was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1920 and had lived in Windsor for the past 24 years.

He was a member of the Lions Club, the Commercial Travellers Association and the Beach Grove Golf and Country Club.

Dr. Bradley is survived by his wife, two sons and one daughter.

•

Adolphus Frederick Barnes of London, Ontario died at Victoria Hospital on October 12 at the age of 53.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1921. He began to practise in Kitchener, later moving to London where he continued until his death.

He served in the Canadian Army Dental Corps during the first Great War. He was of quiet temperament, and genial disposition.

Dr. Barnes is survived by his widow, one son and one daughter.

To thine own self be true, and it follows, as the night the day, thou canst not then be false to any man.—Shakespeare: Hamlet.

If you cannot work with love, but only with distaste, it is better that you sit at the gates of the temple and take alms from those who work with joy.—Kahlil Gebran

Make all you can, save all you can, give all you can.—John Wesley

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Peut-on considérer la digue comme un accessoire démodé, inutile et . . . barbare?*

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En 1855, le docteur Robert Arthur, l'un des deux premiers diplômés du Collège de Dentisterie de Baltimore de l'État du Maryland des Etats-Unis, annonça qu'il avait trouvé une nouvelle méthode d'emploi de l'or cohésif comme obturation.(1) Neuf ans après, en 1864, le Docteur S. C. Barnum, pratiquant dans la ville de Monticello dans l'Etat de New York, conçu l'idée d'employer la digue pour les opérations dentaires, ce qui sans doute, rendit plus facile l'usage de l'aurification.(2) Animé d'un bel esprit professionnel, cet homme gratifia la profession dentaire de sa découverte, qui aurait pu l'enrichir. Malheureusement, cette nouvelle conception de l'exclusion de l'humidité, et sa générosité, ne furent appréciées et reconnues par des médailles et autres honneurs que cinquante ans après. C'est donc grâce à ce dernier que l'aurification se répandit et devint durant de nombreuses années, en Amerique, la reine de toutes les restaurations.

Si l'on considère l'importance que donnent à la digue tous les auteurs de dentisterie opératoire, nier son utilité devient un parti pris ou avouer sa faiblesse, comme opérateur. Dans tous les manuels traitant de la préparation des cavités et des obturations, lui est réservé un chapitre très élaboré. G. V. Black, pour sa part, lui consacre quarante pages.(3) Cet homme remarquable n'a jamais ergoté inutilement sur des choses, qu'il ne connaissait pas. Professeur et pratiquant une profession qu'il aimait, il possédait une grande expérience et, par conséquent, savait ce qu'il disait. Parcourir en entier, au moins une fois, son chapitre intitulé "Pour Maintenir le Champ Opératoire Sec" nous oblige à constater l'importance qu'il accorde à la digue, du fait qu'il la met au premier rang comme procédé le plus recommandable et le plus sûr moyen d'obtenir une étanchéité parfaite du champ opératoire. Tous ceux qui vinrent après lui s'accordent sur ce point.(4) Personne ne la met au second rang. Aucune autre ingéniosité ne peut donc la remplacer avec autant d'efficacité. Elle serait démodée, inutile? Lui a-t-on trouvé un substitut de sa valeur? Comment expliquer qu'elle ne soit pas plus appréciée? Et pourtant, quels avantages d'une part, en retirent les patients qui veulent la tolérer, et, d'autre part, les opérateurs qui consentent à s'en servir! Pourquoi alors recourir à d'autres moyens qui lui sont inférieurs, moyens proposés en second lieu comme pis aller, ou encore, ce que je refuserais de croire, à faire ses cavités dans la salive où pullulent des micro-organismes de toutes sortes, qui peuvent être ensemencés dans la pulpe

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saine, dans le cas des cavités profondes comme superficielles.

G. V. Black, que je considère comme le meilleur auteur sur ce sujet, parce qu'il a prévu pratiquement tous les cas, a bel et bien établi, il y a longtemps, que la digue fixée suivant ses données, est le seul moyen efficace pour opérer, des heures durant, dans un champ opératoire absolument sec. A cet indéniable avantage, qui, à lui seul, devrait décider tout praticien à s'en servir régulièrement, s'il est consciencieux et soucieux des détails, s'en greffent d'autres dont l'importance n'est pas moindre. La protection des tissus voisins, tels que muqueuse, joue, langue; la visibilité obtenue à son maximum; l'agrandissement du champ opératoire; la facilité du maintien de la propreté; l'impossibilité de souiller ses doigts avec la salive; tous ces avantages sont-ils négligeables? Ce n'est pas assez? En voici d'autres, qui vous rangeront du coté de ses partisans: rapidité d'exécution dans le travail; amoindrissement de la douleur; et prolongation de la durée des obturations. En faut-il davantage pour prouver que la digue est l'accessoire le plus utile qui existe?

Si vos patients étaient au courant de tout cela, ne croyez-vous pas que les indécis, les entêtés, qui peut-être vous empêchent de vous en servir aussi souvent que vous le voudriez, consentiraient d'eux mêmes à vous la laisser poser et finiraient par l'exiger? Non, n'attendez pas le jour où l'éducation dentaire sera telle, que le public vous jugera d'après ces moindres détails.

Vous, qui vous faites traiter quelquefois par des confrères, cherchez-vous ceux qui n'ont aucun souci des détails? Avez-vous observé les allées et venues de quelques-uns d'entr'eux? Les endroits où voyagent les mains, les doigts, la transpiration qui les affectent et qui reviennent toujours dans la salive? N'apprécieriez-vous pas la digue à cet instant? Heureusement que tous ne sont pas des observateurs, car nous serions vite dégoutés des faits et gestes qui se passent autour de nous. Mais méfiez-vous, il s'en trouve, et c'est même assez souvent la raison pour laquelle les patients ne reviennent plus.

Oui, la digue est non seulement indispensable dans les cas de traitements de canaux, pour les aurifications, et nécessaire durant la préparation des cavités profondes où la pulpe peut être dénudée, infectée, sans elle, mais aussi très utile dans tous les autres cas, à cause de la propreté du champ opératoire, qu'elle maintient, avec l'aide de la poire à air. Ne plus vouloir s'en servir parce qu'un, deux ou trois cas se sont présentés où l'on a vraiment trop insisté, parce qu'impossible d'application, ne suffisent pas pour la mettre de coté à jamais. Ceux-là peuvent, la traiter de "survivance barbare", mais n'empêcheront pas, quoi qu'ils disent, les autres de la trouver très utile et facile dans la plupart des cas. Le docteur Black n'a pas craint d'établir le pourcentage de son succès à 95%, en y ajoutant que c'était le procédé le plus facile à se servir pour un dentiste. Barbare, le seul fait de poser la digue?— Mais, alors, comment opèrent-ils ceux-là dans les autres interventions? Black dit aussi que "pour plusieurs opérations n'exigeant pas son emploi, du temps était sauvé, et le succès assuré dans chaque intervention où la digue était employée."

Je comprends qu'à lire les textes des auteurs cela devient fastidieux, surtout lorsqu'ils sont remplis de détails. Il y a tellement de cas différents qu'il faut au moins tenir compte de ceux que l'on peut rencontrer le plus souvent, et établir d'après eux des règles, qui s'appliquent à la généralité. C'est ce qui rend l'auteur intéressant et pratique. Black en est un qui a conservé sa popularité grâce aux minuties, qui abondent dans ses textes. Vouloir maîtriser d'un seul effort tous les cas, n'est pas possible. Il faut persévérer, essayer tous les jours, en cherchant la raison de son insuccès. Vous trouverez souvent une correction à une erreur fondamentale, qui vous a échappé. Et de jour en jour, elle deviendra plus facile d'application. C'est alors que vous en saisirez tous les avantages.

A la faculté de Chirurgie Dentaire de l'Université de Montréal, où je consacre tout mon temps, je suis témoin de choses qui, vous l'avouerez, me donnent une

certaine expérience. Eh, bien, le fait de forcer les élèves du service de dentisterie opératoire à préparer toutes cavités, à insérer toutes substances obturatrices avec la digue en place, nous oblige à admettre qu'une amélioration sensible, très notable même, est constatée par celui, qui en a la charge et ceux qui l'aident. Les travaux accomplis n'en sont que meilleurs et le nombre de ceux-ci loin de diminuer, ne cesse de progresser. Il est rare qu'un élève de troisième année prenne plus d'une semaine à se familiariser avec la digue, et par la suite, l'impose à tous les patients, en se servant d'arguments convaincants, parce qu'il a vite compris que c'est à son avantage de s'en servir. Rares sont ceux qui lui résistent. Rares aussi les cas où il avait mal jugé. Généralement notre intervention confirme sa décision. Tout cela, parce qu'il possède bien la manipulation de la digue et connaît tous les petits trucs qui rendent possible son application, même dans les cas difficiles. Quelle facilité pour lui comme pour nous, cliniciens, de juger de la qualité de son travail.

A vrai dire, la technique de la mise en place de la digue n'est pas si difficile que le pensent quelques-uns, si, d'abord, l'on a bien préparé son champ opératoire par une bonne prophylaxie, durant laquelle toutes les parties saillantes tranchantes, rugueuses, sont enlevées, polies, et ne font plus obstacle à son introduction et peuvent la déchirer. Elle devient facile d'application sur les dents où les points de contact sont serrés, pourvu que l'on enduise de beurre de coco la portion de caoutchouc qui doit y passer, en faisant des mouvements bucco-lingualement, après l'avoir étiré pour l'amincir, et si cela ne suffit pas, se servir d'une ligature pour l'y forcer. Si les trous ont été faits, au préalable, aux bons endroits et à des distances disons de 3 à 4 mm., en tenant compte de la position des dents de l'arcade, sa mise en place peut se faire en un rien de temps. Je dirai qu'un bon opérateur, avec un peu d'expérience et d'habileté, fixera les trous sur le caoutchouc aux endroits exacts sans autres moyens ou mesures que par le truchement des yeux. Dans le cas d'une cavité occlusale, il n'est pas toujours nécessaire d'inclure plusieurs dents dans la digue. L'on peut simplement couvrir celles-ci du caoutchouc et le maintenir dans cette position par un "clamp". Ce moyen agrandit le champ opératoire et rend sa visibilité meilleure. Enfin deux cavités proximales se faisant face peuvent être préparées en un plus court espace de temps, et ce, sans humidité, du simple fait de l'usage de la digue, si l'on a pris la précaution de réserver l'espace requis entre les perforations, pour couvrir tout le septum et que l'on a repoussé cette portion de caoutchouc au-delà des parois gingivales au moyen de ligature ou d'une queue de castor. Un "clamp" bien choisi, solidement fixé au collet de l'une des dents maintiendra le tout en place.

Tout bon opérateur, qu'il soit médecin, chirurgien ou dentiste, peut être jugé par sa science, son habileté et les détails qu'il apporte à l'exécution de son travail.

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BIBLIOGRAPHIE

1) "The Story of Dentistry", par M. D. K. Bremner, D.D.S., F.A.C.D., page 125 (Edition 1939).
2) "The Story of Dentistry", par M. D. K. Bremner, D.D.S., F.A.C.D. page 126 (Edition 1939).
3) "Operative Dentistry", par G. V. Black, volume 2, Pp. 269 à 306, (Edition 1936).
4) "Text-Book of Operative Dentistry", par W. H. D. McGehee, D.D.S., M.D., F.A.C.D., (Edition 1936).
4) "American Text-Book of Operative Dentistry", par Arthur B. Gabel, D.D.S., M.A.
4) "The American Text-Book of Operative Dentistry," par Edward C. Kirk, D.D.S., (Edition 1906).
4) "Operative Dentistry", par W. Clyde Davis, A.M., M.D., D.D.S., (Edition 1945, 5e).
4) "Principes et Technique de l'Obturation des Dents", par le Dr C. N. Johnson, traduit de la seconde édition et annoté par Paul E. Gires et Geo. Robin.
4) "The American Text-Book of Operative Dentistry", publié par Marcus L. Ward, D.D.Sc., (Édition 1940, 7e).
4) "Theory and Practice of Crown and Bridge Prosthesis", par Stanley D. Tylman, A.B., D.D.S., M.S., F.A.C.D.

LA DENTISTERIE INDUSTRIELLE

par C. ABERDEEN E. McCABE, D.D.S., F.I.C.D., Valleyfield, P. Qué,
président du Comité de Dentisterie Industrielle de l'A.D.C.

(suite et fin)

En plus des qualifications éducationnelles attestées par son doctorat et sa licence, il doit posséder des notions assez élaborées sur divers sujets, sur lesquels nous reviendrons, tout à l'heure, en parlant du personnel. Pour le moment il suffit de dire qu'un dentiste réellement qualifié, pour mener à bien un programme de dentisterie industrielle, ne peut se trouver à tous les seuils de porte. D'autre part, un tel homme ne se consacrera pas à la dentisterie industrielle, à moins d'être adéquatement rémunéré, car le passé a prouvé que la dentisterie industrielle est trop à la merci des conditions économiques.

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La troisième partie des recommandations, tel que déjà mentionné, traite de la procédure à suivre dans l'organisation et la mise en opération d'un service dentaire industriel. Avant d'en étudier les quatre articles, il est bon de se rappeler qu'il y a, dans chacune des neuf provinces du Canada, des lois régissant la pratique de l'Art dentaire et que tous les services dentaires, soit industriel ou de toute autre nature ou catégorie, doivent se conformer à ces lois.

Ces lois, adoptées par la législature provinciale, ont donné naissance à des corps ou corporations connus dans certaines provinces sous le nom de Collège et dans d'autres sous celui d'Association, Conseil, ou Bureaux.

Ces Collèges, Associations, Conseils ou Bureaux ont un Bureau de Directeurs ou de Gouverneurs ou enfin un comité exécutif, ayant le pouvoir de faire des règlements régissant la pratique de l'Art Dentaire.

Comme les recommandations ont été faites à l'intention des industriels, des ouvriers et des futurs dentistes industriels de toutes les provinces canadiennes, on a cru bon de se servir d'un terme générique, pour désigner tous ces corps autorisés par la loi à régir la pratique de l'art dentaire, dans chacune des diverses provinces.

Le terme "Bureau Provincial de Chirurgie Dentaire" doit donc être interprété pour les fins des recommandations, comme désignant le corps autorisé par la loi, dans chaque province, à gouverner ou régir la pratique de l'Art Dentaire dans les limites de la dite province.

A) La première recommandation de la troisième partie du document, que nous commentons, stipule que:

"Toute clinique industrielle devrait être sous la surveillance du Bureau Provincial de Chirurgie Dentaire concerné."

Aucune recommandation n'est faite quant à la méthode à employer pour exercer cette surveillance, puisque ceci est une prérogative du Bureau Provincial de Chirurgie Dentaire intéressé et non du domaine de l'Association Dentaire Canadienne.

Les Bureaux Provinciaux de Chirurgie Dentaire, qui n'ont pas déjà prévu l'adoption de règlements régissant la surveillance des cliniques industrielles, se feront un devoir et un plaisir dans l'intérêt de la Santé Dentaire Publique d'en élaborer et préciser les détails avec toute industrie intéressée et située dans les limites de sa juridiction.

B) Seconde recommandation:

"Toute demande pour la constitution de Services Dentaires Industriels devrait être faite par l'employeur ou les employés de l'usine concernée."

Il fait ici noter que la profession dentaire ne va pas jusqu'à prendre l'initiative de proposer l'adoption massive des services dentaires industriels ou de conseiller une telle politique; les recommandations ont été stipulées seulement comme mesure de prévoyance pour les industries, qui ont

déjà de tel services ou qui peuvent, dans l'avenir, sentir le besoin ou le désir d'en établir. C'est pour cette raison que les requêtes en vue d'obtenir l'organisation de services dentaires industriels ne doivent pas être faites par un dentiste ou un groupe de dentistes, mais bien par l'employeur ou les employés d'une usine.

La profession n'a aucunement l'intention d'imposer, soit directement ou indirectement, un service dentaire à quelqu'industrie que ce soit, petite ou grande; elle désire offrir tout simplement les bons conseils avisés de ses membres avertis, à toute industrie envisageant l'inauguration de tels services ou les ayant déjà.

C) La troisième recommandation stipule:

"Tous les projets en vue d'instituer un service dentaire industriel doivent être soumis au Bureau Provincial de Chirurgie Dentaire pour examen et approbation avant être exécutés."

Tel que déjà mentionné, la loi donne au Bureau Provincial de Chirurgie Dentaire de chaque province le pouvoir de régir le pratique de l'Art Dentaire en dedans des limites de sa province. Il serait donc très peu sage d'inaugurer un service dentaire industriel sans consulter auparavant le dit Bureau Provincial de Chirurgie Dentaire intéressé et s'entendre avec lui, puisqu'une telle procédure pourrait amener des frais judiciaires aussi bien qu'une réorganisation ou la suspension des services. Pour prouver le bien fondé de cette argumentation, vous me permettrez de dire, sans dévoiler aucun nom, qu'ici, dans la province de Québec, au moins trois projets de dentisterie industriels ont été abandonnés, avant leur inauguration et qu'un quatrième entraîna la comparution du dentiste devant le comité de discipline.

D) La quatrième et dernière recommandation de la troisième section du document affirme que:

"C'est dans le bureau du praticien privé que peuvent être donnés les meilleurs soins dentaires."

Quoique la profession ne désire aucunement minimiser les avantages des services dentaires industriels et quoiqu'elle désire coopérer avec toute industrie, petite ou grande, qui a l'intention d'inaugurer un tel service, elle désire néanmoins maintenir et réitérer l'opinion de gens avisés, en stipulant qu'à l'exception de circonstances non favorables à la pratique privée, c'est dans le bureau du praticien privé que peuvent être données les meilleurs soins dentaires.

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Comme je le mentionnais au début, la quatrième et dernière partie des recommandations traite du personnel requis pour le bon fonctionnement d'un service dentaire industriel. Plusieurs d'entre vous seront portés croire que ces dernières recommandations sont superflues. Si, cependant, ils avaient accès aux 5,900 réponses, que l'enquête nous a permis de scruter, ils changeraient d'opinion, en constatant qu'un certain nombre d'industries, qui n'ont ni dentiste, ni hygiéniste dentaire à leur emploi, prétendent maintenir un service dentaire industriel.

Le succès de tout service dentaire industriel dépend en grande partie de la compétence et des qualifications du personnel travaillant à ce service.

L'A.D.C. a donc cru bon de faire deux recommandations ayant trait au personnel. Le première se lit comme suit:

"Des dentistes légalement qualifiés et en règle avec leur Bureau Provincial de Chirurgie Dentaire respectif."

Il ne faut oublier qu'un dentiste n'a pas la liberté de pratiquer dans toutes les provinces de son choix, même si l'industrie, où il est employé, a des succursales dans chacune des provinces. Il peut avoir le droit de pratiquer uniquement en Colombie Britannique ou dans la province de Québec ou encore dans quelques-unes des autres provinces. Par conséquent il est évident que les dentistes doivent non seulement posséder leur degré universitaire, mais, en plus, être détenteurs d'une licence du Bureau Provincial de Chirurgie Dentaire concerné et être en règle avec le dit Bureau.

L'Association Dentaire Canadienne a cru bon d'ajouter une note explicative concernant les dentistes ainsi établis. "Ils devraient se qualifier dans les divers champs d'activités inclus dans le service

dentaire, se familiariser avec les procédés industriels, surveiller de près toutes manifestations pathologiques buccales causées par des poisons, tels que le mercure, le plomb, le phosphore, la fluorine, les acides, les matériaux radioactifs et autres risques chimiques ou physiques; en présence de toute manifestation buccale de maladies attribuables au métier, il devra coopérer en avertissant au besoin les autres unités de l'établissement, tels que les services médicaux ou l'ingénieur préposé au service de sécurité."

De la note explicative précitée, on peut déduire, qu'en plus de ses qualifications éducationnelles attestées par sa licence, l'autorisant à pratiquer l'Art Dentaire dans une ou plusieurs provinces, le dentiste devrait être bien renseigné sur divers sujets essentiels, lorsqu'il s'agit des services industriels. Le Dr Lyman D. Heacock en énumère quelques-uns, dans l'ordre suivant:

1) *Administration.* Il devrait non seulement être capable de mettre sur pied le rouage d'un bureau dentaire, mais d'organiser (en collaboration avec le Bureau Provincial de Chirurgie Dentaire) un programme dentaire qui cadre avec l'organisation générale de l'industrie, ainsi qu'avec les services médicaux, dont son programme est l'appendice. Il devrait être capable d'organiser et de diriger les activités du personnel à son service et dont il a la responsabilité.

2) *Risques inhérents aux métiers.* Il devrait se familiariser avec les divers procédés, les techniques, et, les méthodes de travail de l'usine, l'étiologie et le contrôle du potentiel toxique, enfin tous les risques attribuables aux diverses occupations, auxquelles chacun des ouvriers est exposé. Il devrait être capable de reconnaître non seulement les lésions primaires et secondaires de n'importe quel état pathologique buccal, mais en plus reconnaître tous les symptômes buccaux des maladies attribuables aux métiers.

3) *Lois de travail.* Il devrait se familiariser avec les lois concernant les accidents de travail de sa province.

4) Il devrait être capable d'intégrer son travail et ses constatations dans le programme des services médicaux, dont il fait partie, et compiler ses dossiers dentaires de façon à ce qu'ils complètent les constatations médicales et fournissent les données statistiques nécessaires à l'évaluation de la santé dans l'usine.

5) Il devrait être habile en exodontie, en chirurgie buccale mineure, ainsi qu'en réduction de fractures.

6) Il devrait pouvoir bien prendre et interpréter les radiographies.

7) Il devrait être au courant des méthodes éducatives et pédagogiques, tant pour ce qui est de l'instruction de l'individu, que pour l'enseignement à des groupes. Il doit être persuadé que le succès de l'aspect dentaire d'un service de santé industriel dépend non de l'isolationisme, mais de l'effet d'une collaboration collective.

Comme vous le voyez, la dentisterie industrielle n'est pas facile, elle n'est pas une panacée pour le dentiste, qui ne réussit pas en pratique privée. Le dentiste en charge doit s'attendre à travailler fort, doit être diplomate, progressif, capable et disposé à vivre selon un niveau, qui inspire la confiance tant des ouvriers que de l'employeur.

B) La deuxième recommandation qui a trait au personnel, concerne l'emploi d'hygiènistes dentaires.

"Lorsque les services d'une hygiéniste dentaire légalement qualifiée sont requis, cette personne devrait pratiquer sous la surveillance personnelle d'un dentiste légalement qualifié."

Quoique nous ne puissions nier la valeur d'une hygiéniste dentaire, et plus spécialement en ce qui a trait aux services prophylactiques dont nous avons parlé, en commentant la première partie des recommandations, les hygiénistes dentaires n'ont pas actuellement dans la plupart des provinces canadiennes l'autorisation de pratiquer; toutefois plusieurs Bureaux Provinciaux de Chirurgie Dentaire prennent actuellement les dispositions nécessaires pour légaliser et créer ce genre de personnel auxiliaire dans les limites de leur province.

Le dentiste industriel peut aussi au besoin, selon le nombre de personnes employées par l'usine avoir recours aux services d'une secrétaire, d'une réception-

niste, etc. . . pour développer les films de radiographie, stériliser les instruments et vaquer aux multiples occupations du programme administratif déjà mentionné.

Conclusions

Le but de la dentisterie industrielle est d'améliorer et de maintenir la production de l'usine ainsi que d'augmenter l'efficacité et le rendement de l'employé, en réduisant la perte de temps et le manque d'énergie attribuables à un mauvais état de santé, causé soit directement ou indirectement par des dents ou des gencives malades.

Pour parvenir à ce but un service dentaire industriel doit donc atteindre tous les employés d'une usine.

Comme les services diagnostiques, que nous venons d'étudier en détail, peuvent être établis dans une usine sur une base quasi-obligatoire, tandis que les services thérapeutiques, même les mieux organisés ne peuvent être que facultatifs, l'on se rend compte de la sagesse des recommandations de l'Association Dentaire Canadienne.

17, Jacques Cartier
Valleyfield, Qué.

Le plan de la province d'Alberta pour les assistés de l'Etat

Le plan de services dentaires pour les assistés de l'Etat fonctionne, dans cette province, depuis plus de deux ans. D'après cette organisation, le gouvernement effectue des paiements mensuels à l'Association Dentaire d'Alberta sur une base de tant par tête, pour chaque assisté. En retour, l'Association paie des honoraires aux dentistes de la province, d'après une échelle établie. Apparemment, ce plan est le seul du genre en exercice pour des services dentaires. Une autre province se propose d'établir un plan similaire. Cet arrangement satisfait et le gouvernement et la profession dentaire. Pour connaître le rouage détaillé de ce plan, on peut consulter le Journal de l'A.D.C. (livraison de juillet 1948), en lisant l'article: "Dental Treatment Plan for Pensioners." L'A.D.C. a décidé de favoriser ce genre d'organisation pour tout plan du gouvernement finançant des services dentaires. A la dernière réunion du Bureau des Gouverneurs, à Saskatoon, la résolution suivante fut adoptée:

"*Attendu* que le premier devoir d'un organisme officiel dentaire provincial est de protéger le public et de veiller au maintien d'un servive de santé dentaire satisfaisant;

Attendu que l'organisme officiel dentaire a des pouvoir disciplinaires;

Attendu que la profession a prouvé qu'elle a la capacité d'administrer un service dentaire;

Attendu que, à notre avis, un service de santé dentaire peut être administré plus adéquatement et plus économiquement par la profession elle-même;

Il est résolu que ce Comité recommande au Bureau des Gouverneurs que tout plan mis de l'avant par le gouvernement pour l'établissement de service de santé dentaire renferme une clause, qui fasse que le paiement des services soit fait par le gouvernement à l'organisme dentaire de chaque province sur une base de tant par tête; l'organisme officiel, à son tour, administrera ces fonds pour donner au public des services dentaires adéquats."

Lettres aux Gouverneurs, vol. 5, no 16.

Note de la rédaction: La province d'Alberta paie pour les soins dentaires à tous les assistés et leurs dépendants, qui peuvent choisir leur dentiste. Ces assistés sont ceux, qui reçoivent des pensions de vieillesse, les aveugles, les mères necessiteuses, etc.

Dans le monde dentaire

Cinquantième anniversaire de la Fédération Dentaire Internationale.

La Fédération Dentaire Internationale vient d'annoncer que son Comité Exécutif tiendra sa réunion annuelle, l'an prochain, à la fin de juillet, à Paris, France, pour répondre à l'invitation du Comité National Français. La F.D.I. a été fondée à Paris, en 1900, et il convenait que le cinquantième anniversaire soit célébré au lieu de sa fondation. Des organisations spéciales sont en cours pour fêter cet évènement. Il a été décidé que La Semaine Dentaire de Paris aurait lieu en même temps.

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Itinéraire du voyage du président dans l'Ouest du pays.

Le président de l'A.D.C., le Dr Fisk, a visité les provinces de l'Ouest, durant le mois de novembre. Son voyage a compris les arrêts suivants et il a adressé la parole à ces différents endroits:

Samedi, le 5 novembre, à Winnipeg, à la Manitoba Dental Association.

Lundi, le 7 novembre, à Régina, à la Regina Dental Society.

Mercredi, le 9 novembre, à Lethbridge, à la Lethbridge Dental Society.

Jeudi, le 10 novembre, à Calgary, à la Calgary Dental Society.

Samedi, le 12 novembre, à Victoria, à la Victoria Dental Society.

Lundi, le 14 novembre, à Vancouver, à la Vancouver Dental Society.

Jeudi, le 17 novembre, à Edmonton, à la Edmonton Dental Society.

Samedi, le 19 novembre, à Saskatoon, à la Saskatoon Dental Society.

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Bureau Médical et Dentaire du Ministère de la Défense.

Daté du 24 août 1949, l'ordre-en-conseil No 4291 fut adopté. Cet ordre-en-conseil se lit comme suit:

"Son Excellence le Gouverneur-Général-en-Conseil, sur recommandation du Ministre de la Défense Nationale, consent avec plaisir d'ordonner que:

1) Un Bureau soit constitué et que ce Bureau soit appelé le Bureau de Conseil des Services Médicaux et Dentaires du Ministère de la Défense Nationale (ci-après nommé le Bureau).

2) Les devoirs et les fonctions du Bureau seront de conseiller le Ministre de la Défense sur tous les sujets en relation avec la défense du Canada, à l'occasion d'un état d'urgence et sur tous les sujets s'occupant de l'organisation et de l'assignation du personnel médical, dentaire, garde-malade et hospitalier, des fournitures et des facilités des hôpitaux et d'accomplir ces devoirs conjointement avec le Ministre, quand celui-ci le jugera à propos.

3) Le Bureau sera constitué comme suit:

(a) le Directeur Médical Général, Marine Royale Canadienne

(b) le Directeur Général des Services Médicaux, Armée Canadienne

(c) le Directeur des Services de Santé, Aviation Royale Canadienne

(d) le Directeur Général des Services Dentaires

(e) le Directeur Général des Services des Traitements, Département des Affaires des Vétérans

(f) le Coordinateur de la Défense Civile

(g) Un représentant de chacun des organismes suivants:

(1) Conseil des Hôpitaux Canadiens

(2) Association Dentaire Canadienne

(3) Association des Gardes-Malades Canadiennes

(4) Association Canadienne de Santé Publique

(5) Département du Bien-Etre et de la Santé Nationale

(6) Département du Travail

(7) Bureau de la Recherche de la Défense

(8) Association Canadienne Médicale de la Défense

(9) Association Canadienne Dentaire de la Défense; et

(10) Trois représentants de l'Association Médicale Canadienne, nommés par cette Association.

4) Le Ministère de la Défense Nationale nommera, au sein des membres du Bureau, un président, qui convoquera et guidera les assemblées du Bureau et qui aura la direction générale de son travail.

5) Le Bureau, avec l'approbation du Ministère de la Défense Nationale, pourra:

(a) nommer des comités dans le but d'aider le Bureau dans l'accomplissement de ses devoirs et fonctions.

(b) établir un comité exécutif pour s'occuper des affaires du Bureau, entre ses assemblées;

(c) faire des statuts et des règlements pour ses activités et pour l'accomplissement de ses devoirs et ses fonctions.

6) Les dépenses du Bureau, y compris un secrétariat permanent, et les déboursés de voyage de ses membres, seront prises à même les fonds mis à la dispositions du Ministère de la Défense Nationale.

7) Le Bureau pourra avoir un secrétaire, qui sera nommé par le Ministère, sur recommandation du Bureau. Tous les autres employés requis pour le travail du Bureau pourront être des personnes faisant partie de la Commission du Service Civil du Canada, dans le Département de la Défense Nationale ou d'autres départements."

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Soirée d'études dentaires à Saint-Hyacinthe

Mercredi soir, le 28 septembre 1949, avait lieu à Saint-Hyacinthe, une soirée dentaire, sous les auspices de la Société Dentaire de St-Hyacinthe. Tous les dentistes de la région et des villes avoisinantes y avaient été invités, ainsi que des représentants de toutes les sociétés dentaires de la province.

De nombreux membres de la profession dentaire se sont rendus à cette invitation. Il y avait des représentants de Sherbrooke, Granby, Sorel, Drummondville, Magog, St-Jean d'Iberville, en tout une quarantaine de dentistes.

Pour cette occasion, la Société Dentaire de Saint-Hyacinthe offrait à ses invités comme conférencier, le docteur Victorien Dubé, spécialiste en prothèse. Le docteur Dubé avait choisi comme sujet de causerie: "Les dentiers immédiats; avantages et inconvénients." Avec de nombreux modèles de démonstration, le docteur Dubé a su intéresser les dentistes présents pendant plus d'une heure et demie.

Après la conférence, les invités furent reçus au Club Canadien, où la discussion sur un grand nombre de sujets se rapportant à la profession dentaire furent longuement et chaleureusement discutés.

Cette réunion avait été organisée grâce à l'activité du docteur Laurent Picard, président actuel de la Société Dentaire de St-Hyacinthe, secondé par tous les directeurs de la Société.

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Déduction d'impôt désavouée pour les dentistes salariés

Le 27 septembre dernier, à la Chambre des Communes, le Ministre des Finances a déclaré qu'un amendement avait été fait à la Loi d'Impôt de Guerre sur le Revenu, à l'éffet que les salaires étaient considérés comme des revenus nets en face des impôts. La section 6, sous-section 6, de la loi amendée se lit comme suit:

> "En compilant les revenus provenant d'un office ou d'une position, aucun montant ne peut être déduit comme dépense ou cotisation faite en vue de gagner le revenu: . . . "

Cette question n'était pas clairement énoncée dans la loi originale. Le Ministère avait statué que le salaire était un revenu net vis à vis l'impôt, mais plusieurs appels avaient été inscrits à la Cour de l'Echiquier et, dans chaque cas, la Cour avait interprété la loi comme signifiant que les argents dépensés dans le but de gagner (par exemple, la licence) représentaient une déduction permise.

En 1947, l'Association Dentaire Canadienne, après plusieurs démarches, avait obtenu du Ministère des Finances une mise au point allouant la déduction des frais de licence. Il semble que cette mise au point d'alors est maintenant inexistante par ce nouvel amendement de 1948. En conséquence, les frais de licence sont déductible pour 1947, mais non déductibles pour 1948 et les années suivantes. Les dentistes à salaire, qui ont soustrait leurs frais de licence annuels sur leur rapport d'impôt de 1948, reçoivent des comptes pour cette licence.

L'Association a toujours pensé qu'il était injuste de ne pas permettre aux membres salariés de déduire ces déboursés obligatoires pour pouvoir exercer leur profession. La licence annuelle est une dépense nécessaire et justifiable et peut être déduite par les membres en pratique privée. Le principe invoqué paraît injuste.

De temps en temps, les autorités nous ont conseillé de contourner la difficulté en faisant payer cette licence par l'employeur. A cette suggestion, nous avons fait remarquer que les principaux employeurs de nos membres étaient les gouvernements et que ceux-ci ont toujours refusé de solder cette dépense.

Selon des renseignements reçus de bonne part, cette difficulté est née du fait que plusieurs autres groupements ont reclamé une déduction identique. Ces groupements comprennent des unions, dont les licences sont, d'une façon générale, plus élevées que celle de nos membres.

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Prétentions exagérées de certains dentifrices

La réclame faite par les distributeurs de dentifrices, à base d'ions d'ammonium vient d'être examinée par le Gouvernement Fédéral. Comme résultat, une lettre circulaire a été préparée et distribuée par le Département des Aliments et des Médicaments du Ministère de la Santé et du Bien-Etre Social à ceux qui s'occupent de la préparation et de la distribution de ces dentifrices. La lettre est daté du 29 septembre et se lit comme suit:

Réclame des dentifrices

"L'importance donnée récemment aux expériences conduites sur l'usage des ions d'ammonium, leurs effets sur le lactobacillus acidophilus et leurs répercussions possibles sur la carie dentaire a déclanché une campagne d'annonce pour les dentifrices en général. Une grande partie de cette réclame a été spectaculaire et, nous croyons, trop optimiste, sinon fallacieuse. Les dirigeants de la profession dentaire ont déclaré à maintes reprises qu'actuellement il n'est pas possible d'évaleur les effets des ions d'ammonium sur la carie dentaire. Les rapports étroits, qui existent entre ces bacilles et la carie dentaire, sont des faits bien établis et il paraîtrait logique que tout agent, qui réduirait le nombre de ceux-ci, aurait une influence sur celle là. Cependant, toute probable que semble cette assertion, il faut attendre que des données cliniques bien établies confirment ces théories. La profession dentaire estime qu'il faudra deux ans de constatations cliniques, avant de pouvoir se prononcer sur la valeur réelle de ces dentifrices.

Le but premier des dentifrices est de nettoyer. Quand les ions d'ammonium se trouvent dans la bouche en quantité suffisante et pour une période de temps assez longue, il semble que la teneur de la salive en lactobacilles est à la baisse. Il ne s'ensuit pas, cependant, qu'un dentifrice, qui accomplira ces deux ou l'une ou l'autre de ces fonctions, préviendra la carie ou qu'il abaissera d'une façon significative l'apparition de nouvelles caries. D'autres facteurs, comme la diète, influencera les résultats.

En considération de ce qui précède, pour le moment, le Département considère comme trompeuse toute réclame au sujet d'un dentifrice, contenant ou non des ions d'ammonium, qui prétendera:

1) arrêter ou prévenir la carie dentaire;

2) avoir un effet sur les caries existantes;

3) réduire la fréquence des caries.

Les prétentions des dentifrices à base d'ions d'ammonium doivent se limiter à leurs effets sur les lactobacilles et, alors seulement, si des résultats précis et évidents justifient les prétentions pour le produit fini, tel qu'annoncé."

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Dentisterie Industrielle

Un pamphlet intitulé "Industrial Dental Services" vient d'être publié par l'Association. La matière de ce pamphlet a été préparée par le Comité de Dentisterie Industrielle. On peut en obtenir une copie en écrivant au Secrétaire, Association Dentaire Canadienne, 211 Rue Huron, Toronto.

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Nécrologie

Le 28 octobre, est décédé le docteur Sténio Robillard, à l'âge de quarante-huit ans. Le docteur Robillard était le fils de l'Hon. Juge J. A. Robillard, autrefois de la Cour des Jeunes Délinquants. Le docteur Robillard avait obtenu son diplôme de l'Université de Montréal, en 1925 et avait toujours pratiqué à Montréal. Nos condoléances à sa famille.

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Rétrospective . . .

Le comité de rédaction de la section française du Journal est heureux d'offrir à ses lecteurs ses voeux de: "Joyeux Noël et Bonne et Heureuse Année".

Avant de finir cette première moitié du vingtième siècle, qu'il nous soit permis de regarder en arrière et de constater les progrès accomplis par notre groupement dentaire de langue française.

D'emblée, on peut constater des améliorations notables.

Notre faculté de l'Université de Montréal, sous l'impulsion de nouveaux dirigeants, a conquis sa place au sein des grandes écoles américaines. Un nombre considérable d'élèves s'y presse pour les cours et les cliniques et, faute d'espace, beaucoup d'applications, venant de toutes les parties de l'Amérique, sont refusées. Une sélection peut être faite parmi ces demandes et la qualité des étudiants, par le fait, est améliorée. Des diplômés de l'Université de Montréal sont retournés, chaque année, dans les provinces Maritimes, dans l'Ontario et dans l'Ouest où des agglomérations de canadiens de langue française se sont fixées. Des organisations étasunisiennes, comme la Kellogg Foundation, ont découvert notre Université et lui facilitent la tâche d'organiser des cours post-scolaires, qui attirent chez nous des praticiens étrangers et des maîtres de réputation internationale.

Notre Collège des Chirurgiens-Dentistes de la Province de Québec, par de nouveaux règlements et de nouvelles lois, a contribué à doter notre groupement de caractères plus professionnels; en stabilisant ses status, le Collège a donné aux Gouverneurs la facilité d'entreprendre des projets d'envergure plus grande et plus durable. L'apparition de nouvelles figures

au Bureau des Gouverneurs confère au Collège une allure plus jeune et plus enthousiaste.

Depuis quelques années, nous avons assisté à l'éclosion de nouvelles Sociétés Dentaires, de par la Province de Québec. Les régions de Joliette, du Saguenay et d'autres ont vu se fonder des Sociétés dentaires, dont les avantages ne sont plus à énumérer, tant au point de vue scientifique qu'au point de vue fraternisation professionnelle.

Les Sociétés plus agées—dont plusieurs ont célébré, cette année, leur anniversaire d'argent—jouissent d'une faveur sans précédent auprès des dentistes; les programmes d'activités sont des plus intéressants et le recrutement des plus encourageants.

L'intérêt à l'Association Dentaire Canadienne par les organismes officiels des dix provinces du Canada va en augmentant et les contributions pécuniaires à l'organisation centrale sont plus substantielles. Cette aide donnée à l'A.D.C. lui permettra de réaliser des projets d'envergure nationale, projets toujours remis à plus tard, à cause du manque de support nécessaire. Notre section du Journal va bien. La collaboration ne chôme pas et c'est avec regret que nous devons différer la publication d'excellents articles, qui nous sont remis par des confrères.

Nous ne voudrions pas clore cette énumération, sans souligner les vides laissés par la mort de plusieurs confrères, survenue au cours de l'année.

Que leurs familles soient assurées que nous conservons un bon souvenir de ces disparus et que leur mémoire occupe une place dans nos activités professionnelles de tous les jours et dans nos prières.

GERARD DE MONTIGNY.

L'alvulsion dentaire chez les diabétiques

On sait les dangers que peut présenter une avulsion dentaire chez un diabétique; dans ce cas, une collaboration étroite entre le médecin et le médecin-dentiste est indispensable.

MM. Barac et Kempeneers de la clinique médicale de l'Université de Liège (Prof. L. Brull) insistent sur les précautions à prendre en pareil cas. (Rev. méd. de Liège, No 10, 1949). Ils recommandent:

1) S'il s'agit d'un diabète léger, équilibré par le régime seul, il faut, en cas d'affection dentaire, administrer de l'insuline avant l'intervention et pendant une semaine après celle-ci (2 fois, 20 unités par jour). Il sera prudent d'associer à l'insuline, deux fois, 300,000 unités de pénicilline.

2) S'il s'agit d'un diabéte traité par l'insuline, il faudra augmenter la dose (au lieu de deux fois, 20 unités, donner 2 fois, 30, boire trois fois, 30 unités). Pénicilline, comme ci-dessus.

3) En cas d'abcès dentaire et d'avulsion indispensable, le traitement insulino-pénicillinique doit être encore renforcé.

En cas d'abcès, il faut inciser et évacuer le pus.

Le tout doit se faire sous le contrôle du médecin traitant.

MEDECINE ET HYGIENE, 1er septembre 1949.

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